PROCEEDINGS

OF THE

MADRAS GOVERNMENT

IN THE

PUBLIC WORKS DEPARTMENT,

FOR THE

MONTH OF SEPTEMBER

1861.

PRINTED BY AUTHORITY.

MADRAS:

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1861.

PUBLIC WORKS DEPARTMENT.

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		1861.			
198 & 199	Procs. Milty. Dept., approving the estimate for re-roofing and reparing the lower Barracks at Ranepet in the Dist. of N. Arcot, communicated to the Chief Engr.	19th Sept. No. 1,755.	....	30th Jan. 1861, Nos. 406, 407.	Ibid
200 & 201	Refund of the sums which Mr. Dudgeon and other Covenanted Engrs. in his position have forfeited for not passing in one of the vernacular languages, sanctioned.	20th Sept. No. 1,756.	....	13th Dec. 1855, Nos. 19, 20. 29th Aug. 1859, Nos. 64, 65. 8th March 1861, Nos. 134, 135. 4th June 1861, Nos. 32, 33.	1956 & 1957
202 & 203	Chief Engr.'s recommendation for promotion of certain Officers on the ground of distinguished merit, refused.	20th Sept. No. 1,757.	....	9th Oct. 1860, Nos. 130, 131. 21st Aug. 1861, Nos. 332, 333.	1957 to 1960
204 & 205	Arrangements proposed by the Chief Engr. of I. and C. Company for working the Ferries on the Company's Canal, approved.	20th Sept. No. 1,758.	....	31st May 1861, Nos. 266, 267. 1st July 1861, Nos. 3, 4.	1960 & 1961
206 & 207	Copy of a letter from the Chief Engr. regarding certain advances, forwarded to the Inspector Genl. Pub. Works Accounts.	20th Sept. No. 1,759.	....	26th June 1861, Nos. 316, 317.	1961
208 & 209	Govt. of India informed that no copy of the Contract with the I. and C. Company was furnished to this Govt.	20th Sept. No. 1,760.	....	7th Dec. 1860, Nos. 91, 92. 10th Dec. 1860, Nos. 121, 122. 5th Jany. 1861, Nos. 31, 32. 9th Jany. 1861, Nos. 108, 109. 15th Feb. 1861, Nos. 195, 196. 7th March 1861, Nos. 120, 121.	1962
210	Report from the Chief Engr. on the navigable Rivers and Canals in this Presidency, forwarded to the Govt. of India.	20th Sept. No. 1,761.	....	4th Aug. 1860, Nos. 48, 49.	Ibid
211—216	Mr. Shannon directed to be restored to his former post as Sub-Overseer.	20th Sept. No. 1,762.	....	3rd April 1861, Nos. 7, 8. 8th May 1861, Nos. 58, 59.	1962 to 1965
217 & 218	Proposals of the Chief Engr. for making 100 Bayley's Rain Gauges, sanctioned.	20th Sept, No. 1,763.	....	3rd Sept. 1861, Nos. 5, 6.	1965 & 1966
219 & 220	Procs. Educal. Dept., sanctioning grants-in-aid of erection of certain School buildings, communicated to the Chief Engr.	20th Sept. No. 1,764.	....	Pub. 16th August 1858, Nos. 35, 36. 10th July 1861, Nos. 87, 88.	1966

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1861.			
221 & 222	Continued employment of three individuals, viz., M. Parthasaradi, D. Sambia and Abdúl Khader, as Sub-Overseers in the Kistna Dist. for 12 months from the 25th August 1861, permitted.	21st Sept No. 1,765.	....	19th Sept. 1860, Nos. 190, 191.	1967
223 & 224	Order directing the recovery of a gratuity paid on account of a cooly, who was killed at Gingee in South Arcot, from Govindo Mudali, Periana Mudali and Camsth Maistry and Sub-Overseers, cancelled.	21st Sept. No. 1,766.	....	5th Aug. 1861, Nos. 73, 74.	1968
225 & 226	Letter from the Dy. Chief Engineer, regarding the case of certain Serjeants in the D. P. W. who lose a portion of their pay in consequence of the operation of certain order, with orders thereon.	21st Sept. No. 1,767.	....	27th June 1861, Nos. 333, 334.	1968 & 1969
227 & 228	Estimate for a small irrigation work in the Survasiddy Táluq, Vizagapatam, sanctioned.	21st Sept. No. 1,768.	....	None.	1970 & 1971
229 & 230	Result of a reference made by the Acct. Genl. to the Audr. Genl. of India on the subject of crediting to the P. W. D. the rents of all State buildings and the proceeds of tolls and ferries, awaited.	21st Sept. No. 1,769.	....	26th Sept. 1859, Nos. 26, 27. 6th Octr. 1860, Nos. 99, 100. 25th Oct. 1860, Nos. 321, 322. 17th Nov. 1860, Nos. 275, 276.	1971 to 1974
231 & 232	Removal from the Budget of an item sanctioned on account of a shed for the cover of the Camp Equipage at Cocanada, sanctioned.	21st Sept. No. 1,770.	....	14th Dec. 1860, Nos. 201, 202.	1975
233 & 234	Chief Eng.'s recommendation to permit Corporal Flecknoe to enter the Civil Engineering College as a Military student, acceded to but College allowance refused.	21st Sept. No. 1,771.	....	26th Feb. 1861, Nos. 338, 339. 4th March 1861, Nos. 36, 37. 16th April 1861, Nos. 223, 224. 3rd Dec. 1860, Nos. 27, 28.	Ibid
235 & 236	Copy of the order of Govt., dated 27th Sept. 1860, No. 2,012, ordered to be furnished to the Collector of Nellore.	23rd Sept. No. 1,772.	....	30th Sept. 1856, Nos. 87, 88. 27th Sept. 1860, Nos. 316, 317. 14th June 1861, Nos. 146—148.	1976 to 1978
237 & 238	Chief Engr. authorized to complete the repairs of the Sampajee Ghát at a further outlay of 700 Rupees.	23rd Sept. No. 1,773.	....	4th Jan. 1854, Nos. 7, 8. 10th June 1856, Nos. 106, 107. 29th Aug. 1861, Nos. 435, 136.	1978 to 1980
239 & 240	Letter from the Chief Engr. submitting accounts of advances made to the Stone Cutters shipped from this Presidency for Alguada Reef Light	23rd Sept. No. 1,774.	....	4th Oct. 1860, Nos. 55, 56. 26th Jan. 1861, Nos. 354, 355.	1980 to 1981

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
	house works, transmitted to the Supt. of the said LightHouse.	1861.		21st March 1861, Nos. 341, 342. 13th April 1861, Nos. 202, 203. 18th June 1861, Nos. 198, 199. 3rd Aug. 1861, Nos. 54—56.	
241	Govt. of India requested to give credit to the balance of charges incurred on account of the labourers sent to the Alguada Reef Light-House.	23rd Sept. No. 1,775.	....	None.	1981
242 & 243	Letter from the Inspr. Genl. Medl. Dept., reporting that he has adopted measures to send Dressers to Upper Godavery, communicated to the Chief Engineer.	23rd Sept. No. 1,776.	....	17th Sept. 1861, Nos. 171—173.	1981 & 1982
244 & 245	Name of Overseer O'Neill ordered to be substituted for Mr. Howell, in paragraph 2 of the order of Govt., dated 13th Sept. 1861, No, 1,718.	24th Sept. No. 1,777.	....	10th Aug. 1861, Nos. 194, 195. 13th Sept. 1861, Nos. 124, 125.	1982
246 & 247	Procs. Milty. Dept. regarding certain works at Secunderabad, communicated to the Chief Engineer.	24th Sept. No. 1,778.	....	Mily. 9th Aug. 1861, Nos. 158, 159,	1983
248 & 249	Procs. Milty. Dept. relating to certain improvements proposed to the Powder Magazines at Malliapooram and Calicut in Malabar, communicated to the Chief Engineer	24th Sept. No. 1,779.	....	None.	Ibid
250 & 251	Procs. Mily. Dept. approving the estimate for certain alterations and improvements to the buildings occupied by the Horse Battery at Cannanore in the Malabar District, communicated to the Chief Engr.	24th Sept. No. 1,780.	....	None.	Ibid
252 & 253	Procs. Milty. Dept., approving the estimate for removing and re-building the demi gorges and repairing the cazemates of the bonnette in front of the St. Thomé Ravelin of Fort St. George, communicated to the Chief Engineer.	24th Sept. No. 1,781.	....	None.	Ibid
254 & 255	Procs. Pub Dept., respecting certain sanitary and Medl. arrangements of the Neilgherries, communicated to the Chief Engr.	24th Sept. No. 1,782.	....	None.	1984
256 & 257	Procs. Judl. Dept., relating to the retention of the Military Guard over the Treasury at Chicacole, communicated to the Chief Engr.	25th Sept. No. 1,783.	....	11th Sept. 1861, No. 3,175, Milty.	1984 & 1985
258 & 259	Procs. Educal. Dept., stating that the charges for removing the Pottery kilns in the permises of the School of Industrial Arts, to another site, and for raising Dr. Hunter's salary can be met from the Budget, communicated to the Chief Engr.	26th Sept. No. 17,84.	....	28th August 1861. No. 1,244, Pub. 31st August 1861, No. 1,259, Pub.	1985
260—263	Papers regarding the improvement of the Port of Negapatam in the Tanjore Dist., with orders thereon.	26th Sept. No. 1,785.	....	5th June 1860, Nos. 60—63. 15th June 1860, Nos. 236—238. 13th April 1861, Nos. 216, 217.	1986 to 1991

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1861.	1861.		
264 & 265	Procs. Judl Dept., allowing the Officers of the Madras Police a further extension for six months, to enable them to pass the vernacular test required of them, communicated to the Chief Engr.	26th Sept. No. 1,786.	....	20th April 1861, Nos. 311, 312.	1993
266 & 267	Procs. Publ. Dept., requiring the execution of the repairs to the temporary sheds and pens in the Zoological Gardens, communicated to the Chief Engr.	26th Sept. No. 1,787.	....	1st July 1861, Nos. 29, 30.	Ibid
268—274	Papers regarding the proposal of a private Company to undertake the irrigation of Orissa without a guarantee of interest from Govt., ordered to be forwarded to the Govt. of India.	27th Sept. No. 1,788.	27th Sept. No. 67.	7th Dec. 1860, Nos. 91, 92. 5th Jan. 1861, Nos. 31—33. 9th Jan. 1861, Nos. 108, 109. 15th Feb. 1861, Nos. 195, 196. 7th March 1861, Nos. 120, 121.	1994 to 2009
275	Letter to the Govt. of India on the foregoing subject.	27th Sept. No. 1,789.	27th Sept. No. 67.	Ditto.	2010
276 & 277	Chief Engr. required to instruct Capt. Walker by Telegram not to make over the charge of his Dept. to Capt. Baker without further orders from Govt.	27th Sept. No. 1,790.	....	10th Sept. 1861, Nos. 62—65.	2011
278 & 279	Certain arrangements proposed by the Chief Engr. with regard to the salaries of the Lascars under the Dist. Engr. Tinnevelly, sanctioned.	27th Sept. No. 1,791.	....	None.	2011 & 2012
280 & 281	Acct. Genl. informed that the receipt of the Coke per ship "Endymion" has been already reported to the Secretary of State.	27th Sept. No. 1,792.	27th Sept. No. 68.	22nd Jan. 1861, Nos. 307, 308. 25th July 1861, Nos. 343, 344.	2012
282 & 283	Compensation on account of the loss of crops standing in lands taken up by the I. and C. Company in Kurnool, sanctioned.	27th Sept. No. 1,793.	....	14th March 1861, Nos. 229, 230.	2013
284 & 285	Sum advanced in the Godavery and Nellore Dists. to the I. and C. Company, required to be speedily adjusted.	27th Sept. No. 1,794.	....	30th July 1861, Nos. 414, 415.	2014
286 & 287	Procs. Milty. Dept., approving the estimate for two small Tunnels across a catch-drain near the Hospital of the Sappers and Minors at Dowlaishwaram, communicated to the Chief Engr.	27th Sept. No. 1,795.	....	None.	2014
288 & 289	Procs. Mar. Dept., referring for orders a letter from the Supt. of Marine, with regard to the proportion of Freight for Public Stores received per "Earl of Hardwicke," communicated to the Chief Engr.	27th Sept. No. 1,796.	....	None.	Ibid
290 & 291	Procs. Milty. Dept., intimating the discontinuance of the provision of recruits for the European Sappers and Miners of the Madras Presidency, communicated to the Chief Engr.	27th Sept. No. 1,797.	....	26th March 1861, Nos. 427, 428.	Ibid

1 Index numbers of the Proceed-ings.	2 Subjects.	3 Dates of Proceed-ings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1861.			
292—294	Reports called for from the Bd. of Rev. and Act. Genl., on the feasibility of paying the cheques on account of Public Works in the villages, awaited.	28th Sept. No. 1,798.	.. ..	18th June 1860, Nos. 296, 297. 27th Sept. 1860, Nos. 316, 317. 14th June 1861, Nos. 146, 147. 13th Sept. 1861, Nos. 118, 119.	2015
295& 296	Chief Engr.'s letter, regarding Capt. Rundall's salary as Acting Dy. Chief Engr., referred to the Controller of Milty. Finance.	28th Sept. No. 1,799.	....	Mis., 5th April 1861, No. 103.	2016
297& 298	Home Despatch, relative to the affairs of the Madras I. and C. Company, communicated to the Consulting Engr. of the said Company.	28th Sept. No. 1,800.	....	To England, dated 27th May 1861, No 50. Do. 4th June 1861, Nos. 51, 52, & 53. Do. 10th June 1861, No. 54.	2016 & 2017
299& 300	Chief Engr.'s Procs., with respect to the supply of instruments made by him for the use of the Officers and Subordinates temporarily employed on the Upper Godavery works, approved.	28th Sept. No. 1,801.	....	None.	2017
301& 302	Establishments for the two Locks lately completed in the Kistna Delta, for the whole year, sanctioned.	28th Sept. No. 1,802.	....	30th Aug. 1861, Nos. 445, 446.	2018
303& 304	Civil Paymaster authorized to pass the full allowances of Dist. Engr. of Godavery and Trichinopoly to Mȧjor Stoddard and Capt. Palmer respectively.	28th Sept. No. 1,803.		30th Aug. 1861, Nos. 439, 440.	Ibid
305& 306	Chief Engr.'s letter, with respect to the navigation of the Beypúr river and the tracing of Karkúr Ghāts &c., with orders thereon.	30th Sept. No. 1,804.	....	18th Oct. 1858, Nos. 84—86. 25th March 1861, Nos. 385—388. 10th June 1861, Nos. 103, 104. 29th July 1861, Nos. 406, 407.	2019 to 2021
307& 308	Col. Horsley required to submit a Memo. of the probable amount required for the construction and transmission of a Lantern for the Malacca Port Light House.	30th Sept. No. 1,805.	....	None.	2022
309—310	Dy. Chief Engr. authorized to write off the overcharge in the bill for the repairs to the Salt Kotar at Halandi in N. Canara.	30th Sept. No. 1,806.	....	30th April 1861, Nos. 455, 456.	2023 to 2025
311& 312	Home Despatch, suggesting the manner and principle on which the accounts of the Dowlaishwaram Workshop should be kept, communicated to the Chief Engr.	30th Sept. No. 1,807.	....	28th Jan. 1861, Nos. 365, 366. 16th April 1861, Nos. 225, 226. To England, dated 7th May 1861, No. 46. 20th July 1861, Nos. 280—282.	2026

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1861.			
313 & 314	Orders on the letter of the Chief Engr. submitting draft rules regarding travelling allowances, deferred until Govt. arrive at a decision on the subject of the re-organization of the P. W. D.	30th Sept. No. 1,808.	....	11th May 1860, Nos. 11—14.	2027 & 2028
315	Chief Engr.'s attention called to an Order of Government requesting the submission of a report on the necessity for the retention of large cash balances in the hands of certain Executive Officers.	30th Sept. No. 1,809.	....	26th Aug. 1861, No. 388.	2028
316 & 317	Chief Engr.'s letter, submitting an estimate for the construction of two Rest Houses for Soldiers, one at Bezwada and the other at Shairmahomedpett in the Kistna District, referred to the Milty. Dept.	30th Sept. No. 1,810.	....	10th Nov. 1860, Nos. 187, 188.	2028 & 2029
318 & 319	Procs. Mily. Dept., authorizing certain orders being omitted from Chief Engr.'s List of unanswered references, communicated to the Chief Engr.	30th Sept. No. 1,811.	....	30th May 1858, Nos. 82, 83. 17th July 1858, Nos. 62, 63. 21st April 1859, Nos. 54, 55. 30th April 1859, Nos. 146, 147.	2029
320 & 321	Procs. Judl. Dept., sanctioning the estimate for certain works to the Jail, Jail Hospital and the quarters of the Jailor at Tranquebar, communicated to the Chief Engr.	30th Sept. No. 1,812.	....	18th March 1861, Nos. 286, 287.	Ibid

PUBLIC WORKS DEPARTMENT.

Tabular Statement of matters of routine for the month of September 1861, *Government of Madras.*

No.	Subject and Order.	Date or Order.	Date of previous Orders.
1	Endorsement of the Chief Engineer, submitting a report on certain breaches by recent freshes in the District of Tanjore, dated 20th August 1861, No. 4,092. Lodged. The Chief Engineer desired to send up in future to Government similar reports in original in view to their being returned after perusal...	5th September.	
2	Letter from the Government Superintendent and Controller Pier Works, stating that in future he will not submit to Government original correspondence, dated 29th August 1861. Recorded....	5th do.	
3	Application from the Chief Engineer for one month's privilege leave for Captain Gahagan District Engineer of Salem, and for placing Lieutenant Clay in temporary charge of that District during the absence of the former gentleman, dated 22nd August 1861. Ordered accordingly.	6th do.	
4	Endorsement of the Chief Engineer, submitting a letter from the Deputy Chief Engineer Central Circle, stating that he has partially completed his tour of inspection of public works, dated 28th August 1861... The Deputy Chief Engineer permitted, as recommended by Colonel Horsley, to complete his inspection of the works in North Arcot and Madras.	do. do	
5	Application from the Chief Engineer for permission to Lieutenant Trail, Acting 2nd Assistant District Engineer Kistna, to apply for the situation of 3rd Assistant in the Grand Trigonometrical Survey Department of India. Granted..	16th do.	
6	Proceedings of the Madras Government, Military Department, stating that certain Officers have vacated their appointments by over-staying the sick leave granted to them, dated 13th September 1861, No. 3,232. Communicated to the Chief Engineer.	19th do.	
7	Letter from the Government of India, requesting this Government to supply the Resident at Hyderabad and Commissioner of Mysore, with copies of Colonel Sir P. T. Cautley's Report on the Ganges Canal, dated 7th September 1861, No. 3,194. The Chief Engineer instructed to forward the copies...	23rd do.	
8	Returns of decreases effected in the Public Works Establishments during the months of May, June, July and August 1861. Forwarded to the Government of India	25th do.	
9	Distribution of the ten copies of Selection from the Records of the Government of India—" Report on the Revenue Returns of the Canals under the Superintendent General of Irrigation North West Provinces for 1859-60."...	25th do.	
10	The Chief Engineer's recommendation that Lieutenant Mackgell 2nd Assistant District Engineer, be appointed to act for Lieutenant Payne 1st Assistant District Engineer Tinnevelly, dated 12th September 1861, No. 4,844. Complied with	27th do.	
11	Distribution of 38 copies of the Selections from the Records of the Bombay Government No. 63, " Annual Progress Reports of the Executive Engineers in Southern, Central and Northern Provinces of Bombay for 1858-59."		
11 A	Return of estimates sanctioned by this Government during the month of August 1861. Forwarded to the Government of India.	30th do.	

Exd. R. H. Lee.

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT,

For the Month of September 1861.

No. 1. Read the following letter from GEORGE TAYLOR, Esq., C. E., to J. D. SIM, Esq., Secretary to Government, dated Madras, 2nd September 1861 :—

SIR,

1. In the statement of facts which I had the honor to submit to the consideration of the Government on the 30th ultimo, I did not state specifically that I have not received any *travelling allowance* for the months of April and May last.

2. I beg leave, therefore, to state that I was travelling for the first six days in April in the discharge of my duties in the Range, and that from that date until the 16th of May, when I received the notice of my dismissal, I necessarily paid the expenses of my travelling equipment consisting of horse, bullocks, bullock-coach, bullock-cart and tent, &c., because I was waiting for orders upon my future duties, and besides this I was compelled to pay those expenses until the end of May, when I was able to dispose of a part of my travelling equipment.

3. I have now therefore the honor to submit, to the consideration of the Government, the following alteration of the 9th fact given in my statement of the 30th ultimo, viz :—

(9.) Besides having received no *pay* since March last, my unrepaid expenditure and loss under my appointment have been as follows, viz :—

	RS.	A.	P.
Travelling expenses from Madras to Madanapalli, to take up my appointment.	113	1	6
Travelling expenses for the first six days in April last, @ 4 Rupees	24	0	0
Maintenance of my travelling equipment from the 6th of April to the 16th of May, 40 days, @ 2 Rupees	80	0	0
Do. do. from the 16th of May to the 31st, 15 days, @ 2 Rupees...	30	0	0
Travelling expenses from Madanapalli to Madras on my return...	60	12	0
Loss from sale of travelling equipment and furniture, &c., &c.	575	0	0
	882	13	6

4. I have now respectfully to entreat the early decision of the Government upon this amended statement, to enable me to avert in some measure other punishments of which I have been peremptorily warned.

No. 2. ORDER THEREON, 2nd September 1861, No. 1,657.

Forwarded to the Chief Engineer in continuation of the Order of Government dated 31st August 1861, No. 1,653.

(Signed) J. D. SIM,
Secretary to Government.

No. 3. Read the following Proceedings of the Madras Government in the Educational Department, dated 2nd September 1861, No. 1 :—

Sanctioning the construction of a building for the Civil Engineering College. (Vide Educational Proceedings, 2nd September 1861, Nos. 1-2.)

No. 4. ORDER, THEREON, 3rd September 1861, No. 1,658.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 5. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th August 1861, No. 4,367 :—

SIR,

In reply to the Proceedings of Government, No. 1,587, dated 20th August 1861, I have the honor to state that I expect to be re-paid by the Board of Revenue for the Rain Gauges supplied to Revenue Officers, and that the cost of those supplied to members of the Department of Public Works, must be charged against the item of contingencies in Budget Statement No. 4 of 1861-62.

No. 6. ORDER THEREON, 3rd September 1861, No. 1,659.

The Board of Revenue will report whether they have made provision in their Budget for the cost of the Gauges.

(Signed) J. D. SIM,
Secretary to Government.

No. 7. Read the following letter from R. COLE, Esq., Principal Inspector General, Medical Department, to J. D. SIM, Esq., Secretary to Government, dated Fort Saint George, 26th August 1861, No. 130 :—

SIR,

With reference to the Proceedings of Government in the Public Works Department and the Order thereon, No. 1,574, of the 17th instant, with the enclosures* therewith received, I have the honor to acquaint you, for the information of Government, that arrangements will be made immediately to detach a Medical Subordinate of the grade of 1st Dresser from the present establishment, for duty at Suttimungalum; there being at present a few supernumeraries in this grade.

* Herewith returned.

No. 8. ORDER THEREON, 3rd September 1861, No. 1,660.

Communicated to the Chief Engineer with reference to his letter dated 3rd August 1861, No. 3,505.

(Signed) J. D. SIM,
Secretary to Government.

No. 9. Read the following letter from J. J. FRANKLIN, Esq., Superintendent of Marine, to J. D. SIM, Esq., Secretary to Government, dated Madras, 31st August 1861, No. 2,446 :—

SIR,

1. In my letter of the 21st ultimo, No. 2,370, I had the honor to report that two Bills, for expenses incurred on account of the Public Works Department, could not be admitted by the Civil Paymaster, as the charges had not been included in the Civil Budget for 1861-62, but that that Officer suggested that I should apply for an advance for them and *for similar Bills,* provision for which would be made in the Public Works Supplemental Budget now in preparation.

2. The Government in their orders thereon were pleased to grant a Treasury order for one Bill, and to point out a mode of adjustment for the other. Nothing, however, was decided as to the disposal of similar Bills.

3. Since my former communication three more Bills, particularized in the margin, incurred for the same Department, have been returned unaudited for a similar reason, and I have to solicit orders thereon.

	RS.	A.	P.
1 Bill for boat hire for June 1861	99	4	6
1 Bill for $\frac{1}{3}$rd freight on Public Work Stores to Cocanada per "Sarah Armitage."	150	0	0
1 Bill for $\frac{2}{3}$rd freight on ditto to Northern Ports and Rangoon, per steamer "Governor Higginson."	4	14	5

No. 10. ORDER THEREON, 4th September 1861, No. 1,661.

Referred to the Chief Engineer for report, with reference to paragraph 2 of the Order of Government, dated 28th August 1861, No. 1,632.

(Signed) J. D. SIM,
Secretary to Government.

No. 11. Read the following Proceedings of the Madras Government in the Public Department, dated 3rd September 1861, No. 1,266 :—

Sanctioning a Supplemental Estimate for completing the Poor House attached to the Civil Dispensary in the Town of Cuddapah. } (Vide Public Proceedings, 3rd September 1861, Nos.5-6.)

No. 12. ORDER THEREON, 5th September 1861, No. 1,662.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 13. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th July 1861, No. 2,776.

SIR,

1. With reference to the letter from the Secretary to the Government of India, No. 1,491, dated 18th July 1860, and in obedience to the Orders of Government thereon, No. 1,663, 4th August following, I have the honor to submit a detailed report on all the rivers, channels, and canals, which are navigable, or can be made so, within the Madras Presidency, together with a Map on a scale of eight inches to the mile, to illustrate the same.

1 Report on all the navigable Rivers, Channels and Canals in the Presidency, with
1 Map to illustrate the same.

2. The report has been compiled from statements received from the District Engineers, and contains :—

(1.) The name of every principal river, channel, or canal.

(2.) Extent in miles.

(3.) Whether navigable all the year round, or for what months.

(4.) For what class of boats or steamers suitable, and their tonnage, and

(5.) General remarks on the capabilities and improvements of each.

3. The rivers, channels, and canals, colored *blue*, represent those which are navigable throughout the year. Those colored *green*, are only so during the monsoon season ; while the *yellow* shows those which it is contemplated to render navigable. There are about 3,487 miles of water communication in this Presidency, which may be classed as follows :—

	Miles.	
Rivers—Navigable throughout the year	351	
Do. during freshes only..	1,257	
		1,608
Channels—Only navigable during the monsoon...		285
Canals and Backwaters—Navigable during the greater portion of the year		1,604
Total miles......		3,487

4. The above is only an approximate calculation, in which are not included the water communications of the independent States of Mysore and Travancore. In the former there are no navigable rivers ; but in Travancore the backwaters are extensive and might, at comparatively small expense, be considerably extended along the Western Coast. The improvement and connection of the several backwaters, along the East and West Coasts of this Presidency, is a subject which has engaged, and is still engaging, the attention of the Public Works Department.

5. The three largest rivers in Southern India, are the Godavery, the Kistna and the Caveri. Most of the others are of minor importance, and are dry, or nearly so, for a greater portion of the year.

6. The Godavery is the only river which can be considered navigable on a large scale ; and as Government are already in possession of detailed information regarding this river, it will not be necessary to observe more, than that for a period of six months it is navigable by steamers and boats of considerable burthen, for a distance of 400 miles from the sea, with the exception of the Barriers, and which are passable only at certain periods of the freshes. With a system of Portages established at the Barriers, such as have lately been sanctioned, the river will be available for the whole of the above distance, for at least eight months of the year. When the improvements in the bed of the first reach, or as far as Baddrachellam, distant 135 miles from the sea, have been completed, the river will be available for boats drawing 3 feet of water, all the year round. The existing impediments consist of shoals and a few isolated rocks easily removable.

Vide Captain Haig's report.

7. All that is yet known of the Kistna is, that navigation is tolerably practicable during the freshes, or for about six months of the year, to a point 30 miles above the Anicut, at Bezwada. Between this point and Kurnool no certain information has been procured ; but above the Barrier, opposite to Kurnool the average fall of the river (and of its feeders, the Beema and Seema) is so small for a long distance, that it is probable navigation could be carried on during freshes. An exploration of this river has been ordered by the Secretary of State, but has not yet been carried out owing chiefly to want of funds.

8. The Caveri is navigable during the freshes for about 80 miles, and is at present made use of for basket boats. Its improvement could only be effected by the construction of extensive reservoirs at its head. These, if carried out, would not only afford navigation to the river, but furnish a supply of water to the Delta of Tanjore during the dry season.

Return showing the extent of Rivers and Canals navigable, or which can be rendered navigable, in the Madras Presidency, together with the class of Boat or Steamers used, and tonnage; prepared agreeably to the Orders of the Government of India, as contained in the Proceedings of Madras Government in the Department Public Works, No. 1,663, dated 4th August 1860.

District.	Name of Rivers, Canals, or Channels.		Extent in miles.	Whether navigable all the year round or for what months.	For what class of Boats or Steamers, and Tonnage.	Remarks.
Ganjam District.	River	Vamshadara..................	65	During the monsoon only from July to Oct.	Small native flat-bottomed boats, drawing when empty 1 foot, and when full $3\frac{1}{2}$ feet of water. Their load is 3 tons.	During the trip of the monsoon, these boats take advantage of the freshes. They go up empty from Calingapatam to Buttely, 65 miles, in from 10 to 13 days, and return with the stream in about four days, loaded with rice, oil seed, &c.; as may be supposed, the navigation is very uncertain, and there are not above two or three opportunities during the season. The fall in the bed of river varies from $3\frac{1}{2}$ to $4\frac{1}{2}$ feet per mile.
		Rookkoolea or Gunga River...	40	Do.	Do. and a considerable number of rafts. All the timber from Goomsoor Forest is floated down the Gunga. For boats of 3 feet draught.	Projects have been submitted for connecting the backwaters, which would form a continuous canal at a small expense from the Chilka to Chicacole, a distance of about 120 miles.
		Chilka Lake and Backwater...	50			
Vizagapatam.	Backwater.	Vizagapatam...	2	Tidal Backwater and navigable all the year round. The rise and fall of tide is about 3 feet.	Small vessels or large boats.	There are no rivers or channels in this District now navigable or capable of being rendered so. The two backwaters, however, could be made good ports of for small craft, at an inconsiderable expense. In both places the trade is increasing.
	Do.	Bimlipatam	3			
	River........	The Godavery above Anicut to Baddrachellam.	103	For eight months in the year for large boats and steamers, and during the remaining four months for boats of very light draught above the gorge.	By large steamers 175′ × 15,′ and country vessels drawing up to 3 feet, and 70 or 80 tons.	For four months during the freshes navigable as far as the Enchampilli or 2nd Basin, 205, and between the other Basins for same period In the Godavery District the whole of the canals and portions of the Godavery River are now navigable all the year round by the largest dhonies or native boats up to 50 tons. They draw when fully laden 6 feet water. The canals are also navigable by small steamers of 100 feet in length by 15 feet in beam, drawing from 2 to $2\frac{1}{2}$ feet water.

Godavery District.	Canal........	Samulcottah	30	All the year round fully navigable.	For small steamers and large boats 50 tons burden, and drawing 6 feet.	The river above the Anicut is navigated by the larger class of steamers, of which the largest is 175′ × 40,′ drawing when laden 36 inches. There is only one channel steamer in use at present, but on the Godavery there are six plying between the Anicut and Baddrachellam. It may be interesting to know the tonnage of boats alone passing through the three locks in the Anicut during the official year 1859-60, and of the value of the freight. The former was 3,20,940 tons. The value of merchandize being 33,56,453 Rupees. In addition to which there were 5,425 timber and bamboo rafts of the total value of Rupees 2,54,607, making a total value of Rupees 36,11,060.
	Do.	Junction Canal	8	Do.	Do.	
	Do.	Cocanada	32	Do.	Do.	
	Do.	Coringa	34	Do.	Do.	
	Channel.....	Ingeram	8	Do.	Do.	
	River........	Coringa	9	Do.	Do.	
	Channel.....	Yanam Bank (portion) ...	14	Do.	Do.	
	Canal........	Ralle and Amalápúr... ...	27	Do.	Do.	
	Channel.....	Gunarum...	20	Do.	Do.	
	Do.	Siddautum	25	Do.	Do.	
	Canal........	Narasapoor	38	Do.	Do.	
	Channels ...	Weyair and Venkiah	47	Do.	Do.	
	Canal........	Ellore	47	Do.	Do.	
	Do.	Gowtami...	30	Do.	Do.	Now navigable... ... ... Miles 653
	Do.	Wruda Gowtami....	17	Do.	Do.	To be made... ... ... ,, 129
	Do.	Vynathayam	19	Do.	Do.	Submitted for sanction in 1860-61 ... ,, 128
	Do.	Vasista	24	Do.	Do.	Godavery River... ... ... ,, 110
	Do.	Upputair...	29	Do.	Do.	
	Channel.....	Maudapitta	12	All the year round fully navigable, if Locks and Weirs were constructed.	Do.	Total miles in District...... 1,020
	Do.	Yanam branch portion... ...	12		Do.	
	Do.	Sollah and Tannalanka... ...	47		Do.	
	Do.	Bendamoor Lunka	14		Do.	
	Do.	Doddipatti	16	Do.	Do.	
	Do.	Mogultur...	7	Do.	Do.	
	Do.	Undi Channel	21	Do.	Do.	
	Do.	Gowtami...	19	Navigable only during the monsoons.	Do.	
	Do.	Vasista...	28			
	Do.	Nackala	24	Do.	Do.	
	Do.	Gostanuddy	39	Do.	Do.	
Kistna.	River........	Kistna	46	Channels navigable only at seasons.	Navigable by boats drawing 5 feet water and 50 tons burden.	The system of canal and river navigation cannot be said to be yet developed. No one canal in the District is complete; and though water communication exists between the Kistna and Godavery, it is for the portion of the distance in this District by means of the Budumér and Colair Lake. The navigation of the Kistna itself is not of great importance at present; boats cannot go higher than Moogetala, a distance of 46 miles from
	Channel.....	Southern High Level Channel		Do.		
	Do.	Northern High Level Channel.		Do.	Do.	
	Do.	Nizampatam...		Do.	Do.	
	Do.	Masulipatam...		Do.	Do.	
	Do.	Budumér...		Do.	Do.	
	Do.	Chinnapoor		Do.	Do.	

Returns showing the extent of Rivers and Canals, &c.—(Continued.)

District.	Name of Rivers, Canals, or Channels.		Extent in miles.	Whether navigable all the year round or for what month.	For what class of boats and steamers and tonnage.	Remarks.
Kistna.	Channel....	Coomamoor		Channels capable of being made navigable.		Bezwada or about 80 miles from Masulipatam owing to the existence of rapids a short distance higher up, and the navigation so far can only be carried on during the five months commencing with the rains about June. In January 1861 an attempt was made by Captains Chambers and Ryves to ascend the river in the steamer "Pioneer," but though it draws only 2 feet of water it failed to get further than Imbrampatam, only $8\frac{1}{2}$ miles from Bezwada, on the rise of the river in June. The District Engineer proposes, in accordance with the directions of Government, to proceed in the steamer to the highest point attainable. The small discharge of the Kistna in the dry season will be understood when I mention that at this time (May) with both Head Sluices and Under Sluices closed, the water is not within six feet of the crest of the Anicut.
	Do.	Western Bank Channel... ...		Do.		
		Old Poolairoor...		Do.		

The traffic by the Kistna is mostly in grain, seeds, and timber, downward; and rice and jaggery, upwards; but as yet it is of little importance. The whole number of boats that have passed through the locks at Bezwada and Seetanagram during the five years since they were opened, amount to 1,584 and 1,140 respectively, as per annexed Statements. Bezwada, however, being a large mercantile town, very many boats halt there without going through the locks. Doubtless the navigation will receive a great impetus by the completion of the High Level Canal to Ellore and of the Masulipatam and Nizampatam canals. It is probable that the chief part of downward traffic will always tend towards the more commodious Port of Cocanada viâ the High Level Canal and Dowlaishwaram, in preference to either of the other places. None of the canals colored yellow in the sketch can be considered as completed; their heads are not furnished with locks, and in some of them, the navigation would be obstructed by bridges and other impediments. A great deal remains still to be done in the Kistna District to perfect the system of canals projected and required:—

Abstract of the Return showing the number of Boats, Rafts, &c., that passed Seetanagram Lock from July 1856 to April 1861.

	Grain.		Other agricultural produce.		Salt.		Lime and shell chunam.		Firewood.		Other goods.		Empty boats.	Total.	Passenger Dhonies.	Paddle boats.	Total.	Grand total of boats.	Rafts of timber.		Rafts of bamboos.		Total rafts.		Total value of goods.
	Number of boats.	Value.	Boats.	Value	Boats.	Value.	Boats.	Value.	Boats.	Value.	Boats.	Value.							Number.	Value.	Number.	Value.	Number.	Value.	
From July to December 1856.....	42	16,275	39	20,880	7	600	..	...	8	255	32	22,765	51	173	...	...	...	173	2	429	49	5,363	51	5,792	66,567
1857.....	35	7,961	15	10,372	...	...	...	...	...	...	6	5,450	...	56	...	...	...	56	51	11,540	70	5,212	121	16,752	40,535
1858.....	201	33,368	18	9,145	...	...	...	...	...	...	11	1,894	196	426	...	2	2	428	71	10,646	74	6.130	145	16,776	61,183
1859.....	207	29,017	3	440	...	...	...	...	...	...	13	5,565	189	412	...	6	6	418	99	23,177	94	18,776	193	41,953	76.975
1860.....	44	5,931	...	...	...	...	...	...	...	...	...	...	21	65	...	...	...	65	47	10.620	42	8,734	89	19,354	25.285
Up to April 1861..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4,288	2	99	4	4,387	4,387
Total......	529	92,552	75	40,837	1	600	...	...	8	255	62	35,674	457	1,132	...	8	8	1,140	272	60,700	331	44,314	603	1,05,014	2,74,932

Abstract of the Return showing the number of Boats, Rafts, &c., that passed Bezwada Lock from July 1856 to April 1861.

	Grain.		Other agricultural produce.		Salt.		Lime and shell chunam.		Fire-wood.		Othergoods.		Empty boats.	Total.	Passenger Dhonies.	Paddle boats.	Total.	Grand total of boats.	Rafts of timber.		Rafts of bamboos.		Total rafts.		Total value of goods.
	Number of boats.	Value.	Boats.	Value.	Boats.	Value.	Boats.	Value.	Boats.	Value.	Boats.	Value.							Number.	Value.	Number.	Value.	Number.	Value.	
From July to December 1856...	66	16,942	42	11.989	...	...	...	...	8	159	33	14,043	31	180	2	...	2	182	21	4,688	8	655	29	5,343	48,476
1857...	47	12,104	106	81,096	5	2,295	...	...	4	34	12	8.550	35	209	...	...	...	209	...	......	76	4,748	76	4,748	1,08,827
1858...	114	27,724	126	1,00,673	..	...	...	...	...	...	31	1,440	158	429	...	...	...	429	36	6,118	34	2,224	70	8,342	1,38,179
1859...	75	13,807	94	85,656	4	1,260	2	73	2	98	3	136	162	342	...	...	...	342	41	12,499	48	5,917	89	18,416	1,18,946
1860...	54	7,212	153	1,22,977	2	500	...	...	2	5	...	.....	183	394	4	...	4	398	49	14,730	35	5,838	84	20,568	1,51,262
Up to April 1861...	...	...	...	......	...	...	...	...	1	4	...	...	23	24	..	...	...	24	14	4,099	77	8,952	91	13,051	13,055
Total......	356	77,289	521	4,02,391	11	4,055	2	73	17	300	79	24,169	592	1,578	6	...	6	1,584	161	42,134	278	28,334	439	70,468	5,78,745

District.	Name of Rivers, Canals, or Channels.	Extent in miles.	Whether navigable all the year round, or for what months.	For what class of boats and steamers and tonnage.	Remarks.
Nellore District.	Canal.—East Coast Canal, so much as is completed in this District.	11	Navigable all the year round.	For boats from 15 to 40 tons, drawing 3 feet water, and for small steamers.	The Cundalur River may prove very useful when connected, as eventually it will be, with the Kistnapatam and East Coast Canal.
	River.—Cundalur............................	15	Do.	Do.	
	Do. Pennár..................................	65	Navigable down-stream only and during the freshes.	For rafts and canoes....	Is very little used, but improvable. The rapid current and desultory character of the freshes, render it practically useless for up-stream navigation even with the aid of steam, though it is by no means impossible a powerful steamer of light draught might occasionally be able to ascend, yet navigation so precarious would be of little value.
	Canal.—East Coast proposed from Dugarázpatam northwards to Chinnaganjam.	130	Proposed to render them navigable all the year round, for boats drawing four feet water and 50 or 60 tons burden.	....	A portion of this proposed Eastern Coast Canal is in the Guntoor District A Canal proposed to be cut by the Madras Irrigation Company from the gorge near Somaishwaram to Nellore has been introduced, which will afford far better navigation than any that could be obtained by improving the river, and if the Company's project is carried out, this Canal will probably be navigable all the year round.
	Do. Do. from Chinnaganjam to Nizámpatam.	30			
	Do. Do. from Chinnaganjam to Guntoor.	45	Do.		
	Do. Kistnapatam from Toolapolium to Pennár river.	17	Do.		
	Do. Madras Irrigation Company's proposed Canal from Kistnapatam Canal to Somaishwaram Pagoda.	50	Do.		
Cuddapah District.					There are no rivers, channels or canals in this District navigable throughout the year. The Péuneru is the only river supposed to be capable of navigation at certain seasons. No experiment has ever been made, and there are no boats whatever on the river in this District, but during heavy freshes rafts of timber and bamboos are occasionally floated down to Nellore. In one of the reports published by the Irrigation Company there is a large item for the improvement of the navigation of the Kundáru and Péneru. The

					former river will be rendered navigable by a discharge of 2,50,000 cubic yards per hour down it, the quantity required for the lower part of the Irrigation Company's project, viz., the Nellore District. A series of Locks will be constructed to correct the fall which averages $2\frac{1}{4}$ feet per mile. The Pénneru averages $3\frac{1}{2}$ feet per mile. This river it is not intended to improve, but to construct a Canal along its banks.
Bellary District.	River.—Tungabaddra from 8 miles above Hurryhur to Wallabapur Anicut.	105	This portion of the river is only used during the monsoons for floating down timber rafts.	Basket boats only used, chiefly at the Ferries. No boats or steamers used for traffic.	A line of navigation is proposed, which is to be diverted from the old Tungabaddra River a little above Maugala, and to be continued to the Wallabapur Anicut a distance of about 46 miles, from which Anicut a Canal is proposed to be made to Bellary 54 miles, and from Bellary the Canal is to take a direction towards Kurnool 110 miles. It is also proposed to cut two Canals at Joonjavamanahalli from the Huggary. One towards Rampur 8 miles, and the other towards Goondaky 46 miles.
Kurnool Dist.	River.—Tungabaddra portion... ...... Do. Kistna portion............	40 75	This portion of the river is only used during the monsoons, for floating down timber rafts.	Basket boats only used chiefly at the Ferries. No boats or steamers used for traffic.	The rivers Tungabaddra and Kistna are both capable of being made navigable, but the cost of improving these rivers would be very great. The navigation of the Kistna below and of the Tungabaddra above Kurnool is not of importance, as the Madras Irrigation Company Canals will connect Kurnool with the Coast Canal and with the country where the Tungabaddra rises. As the schemes of the Madras Irrigation Company develope themselves, it is probable that the Kistna above Kurnool will be rendered navigable.
Madras.	Canal.—East Coast Canal, north and south of Madras.	110	Throughout the year...	For small steamers and boats from 1 to 35 tons drawing 3 feet water.	Masula boats also ply between the Coast and the Pulicat Lake over Bar when open during the monsoon.
	River.—The Kúam...	3	About 6 months in the year.	Do. drawing about 2 feet water.	Within the suburbs of Madras.
North Arcot.					There are no rivers or canals now navigable by boats or steamers all the year round, or even for any short season. The only streams of any size are the Pálár and its two tributaries the Poiney and Cheyáur. These Channels are always dry except just after heavy rain, and cannot be considered capable of being rendered navigable. There is no such thing as a boat on either of the last two named rivers. Occasionally they are not fordable for a few days during a heavy monsoon, and at such times an impromptu raft is constructed by any person who has occasion to cross.

District.	Name of Rivers, Canals or Channels.	Extent in miles.	Whether navigable all the year round or for what month.	For what class of boats or steamers and tonnage.	Remarks.
South Arcot.	River.—Puravenaur, from Cuddalore to the bridge on the Chellumbrum road.	14	Navigable throughout the year.	From 4 to 6 tons, and for small steamers.	The other rivers in this Distrct have too rapid a fall to be navigable. The depth of water in the navigable parts of the Puravenaur and Vellaur varies from 3 to 9 feet
	Do. Vellaur, from the sea to 2 miles past the crossing of the Chellambram road.	6	Do.	Do.	
	Channel.—Vuddavar from the Lower Colleroon Anicut to the Veeranum Tank.	12	During a part of the monsoon.	From 4 to 6 tons, and for small steamers.	The depth of water in the Vuddavar and Khan Saib's Channel vary according to the state of the Colleroon River, from 3 to 6 feet.
	Do. Khan Saib's Channel from Veeranum Tank to Vellaur or Porto Novo.	22	Do.	Do. Chiefly basket boats, but ill-adapted.	The Coast Canal in two portions of which one connects the Paravenaur with the Vellaur river, and the other the Vellaur with the Colleroon is in an unfinished state and at present of no use.
Tanjore District.	River.—Vettaur from head as far as Nagore.	67	Seven miles near Nagore always navigable.	Basket boats carrying about $2\frac{1}{2}$ tons, and also dhonies or country boats of 5 tons by taking advantage of flood tides.	
	Do. Davanathy from Kuvelore to junction with Cadoovayaur at Negapatam.	7	During freshes only. ...	Do. but no dhonies.	
	Do. Cadoovayaur from Thavoor as far as Negapatam.	8	Five miles near Negapatam always navigable and the rest during freshes only.	Basket boats and also dhonies during flood tides.	
	Do. Hurrichendranady from 10 miles west from Cullimode up to its junction with Adappar through Codichoottyaur.	8	During freshes only. ...	By basket boats carrying about $2\frac{1}{2}$ tons.	
	Do. Adappar from Trittrapoondy to Topetory.	22	Twelve miles near Topetory always navigable. The rest during freshes only.	Basket boats and dhonies of 5 tons.	Dhonies of 5 tons can go up the Adappar a distance of 12 miles at all seasons, and to within 2 miles of Trittrapoondy for 12 miles, further during freshes, their further course being arrested by the bridge and road No. 26.

Tanjore District.	River—Vellaur, 12 miles west of Valungany.	22	Five miles always navigable, and the rest during freshes only.	Basket boats carrying $2\frac{1}{2}$ tons, and dhonies carrying about 5 tons.	Dhonies can only ply on those parts of the river which are navigable throughout the year, taking advantage of flood-tides.
	Do. Paymanyaur, from Peroovalendaw to Mootoopetta.	12	During freshes only	Do. but no dhonies.	
	Do. Corrayaur, from Trittrapoondy to Mootoopetta.	16	Seven miles always navigable, and the rest during freshes only.	Basket boats carrying $2\frac{1}{2}$ tons, and dhonies of 5 tons.	Dhonies of 5 tons now proceed up the Corrayaur as far as Mootoopetta 8 miles, at all seasons, and can proceed 7 or 8 miles higher up during the monsoon.
	Do. Maracalcary, from Trittrapoondy up to its junction with Corrayaur.	10	During freshes only	Basket boats, no dhonies.	
	Do. Trimulrajenaur, from Paupanasem to Trimulrajenpatam.	40	Do.	Do.	
	Do. Parasalaur from Capistalem to Karical.	40	Seven miles near Karical always navigable, and the rest during freshes only.	Basket boats and dhonies.	Dhonies of 5 tons are only in those parts which are navigable throughout the year, by taking advantage of flood-tides.
	Do. Codamoorty, from Tricautoopalli through Trimulrajenaur.	......	During freshes only ...	Basket boats.	
	Do. Nundalaur, from Comul up to its junction with Veerasholagun.	20	Do.	Do.	
	Do. Veerasholagun, from Andoothoray to Tranquebar.	28	Do.	Do.	
	Do. Openaur from Sheally to Trimulvassel.	12	Five miles near Trimulvassel always navigable, and the rest during freshes.	Basket boats and dhonies.	Dhonies only in those parts which are navigable throughout the year.
	Do. Koottoováykál or Openaur, from Davikotta to Kodiempolliem.	7	Always navigable	Do.	Dhonies only during freshes.
	Do. South Rajahvaikál from lower Anicut as far as Alagudi.	30	During freshes only. ...	Basket boats.	
	Do. Munnaur from Velungoody as far as Sheally.	60	Navigable during freshes only.	Do.	
	Do. Mannoncondanah, from Edumvaranaur to point Calemere.	20	Five miles near the point always navigable, and the rest during freshes only.	Basket boats and dhonies.	Dhonies only in those parts which are navigable throughout the year.

District.	Name of Rivers, Canals, or Channels.	Extent in miles.	Whether navigable all the year round, or for what months.	For what class of boats or steamers, and tonnage.	Remarks.
Tanjore District.	River.—Vennaur from head to Cordacherry, and 50 miles thence by Hurrichundranuddy and the Adapaur to the coast at Topatory.		Navigable only during freshes.	Basket boats.	
	Cáveri......................................	......	Do.	Do.	
	Do. Munnaur	......	Do.	Do.	
	Canal.—Navigation Canal..................	......	Do.	Do.	
	Do. From Trimulvassel 14 miles (east)............	......	Do.	Do.	Should be taken further inland, and much silted up at present. The portions of the rivers which are navigable throughout the year are those near the coast, andthey are navigable only as far as the influence of the tide is felt. The other portions which are stated to be navigable during a portion of the year are so only from 3 to 4 months during the monsoon, and then with difficulty. The boats generally used in this District are basket boats, the largest of which can carry about $2\frac{1}{2}$ tons. They cannot be brought up the streams even when empty, without great difficulty, and then only by being towed up; they are consequently dismantled when they arrive at the coast, and the leather only is conveyed up-country by a cooly or bandy. The average fall of the rivers is from 2 to $3\frac{1}{2}$ feet per mile, and the best of them could only be rendered navigable by means of numerous dams and locks, and even then the period during which they could be navigable might be considerably reduced, owing to the necessity of drawing off the supply required for the land irrigated by the rivers. Until extensive reservoirs are formed in the Gháts, in the valley of the Cáveri, the rivers in this District cannot, in my opinion, be rendered navigable, for the present supply would not be sufficient both for purposes of irrigation and navigation. The rives which afford the greatest facilities of navigation are the Pamanyaur, the Corrayaur, the Hurrichundranuddy and the Adapaur, into which the Hurrichun-

Tanjore District.					dranuddy falls. Their slope must be considerably less than that of the other rivers, especially near the coast, as the influence of the tide is felt in them from 7 to 12 miles up, and would in some cases be felt higher up, were not the salt water arrested by means of dams (one dam in Adapaur in Valloor limits and another in Pamany limits) to prevent injury to the lands above them. Dhonies of 5 tons now proceed up the Corrayaur as far as Mootoopetta (a distance of 8 miles) at all seasons, and can proceed 7 or 8 miles higher up during the monsoon. Up the Adapaur, dhonies can proceed about 12 miles at all seasons, and to within 2 miles of Trittrapoondy, or a distance of 10 miles further during freshes, their further course being arrested by the bridge on Road No. 26. Dhonies of 5 tons can proceed up those portions of the rivers entered as navigable throughout the year in the above list, by taking advantage of the flood-tides. In the District Engineer's opinion Pamanyaur might be rendered navigable from Manárgudi, or perhaps from Needamangalam to the coast, and the Adapaur from its separation from the Corrayaur to the coast with comparative facility and of no great cost. The District Engineer proposes having a line of levels run up these rivers during the next dry season, for the purpose of ascertaining the work which would be required to render them navigable for dhonies of from 5 to 15 tons.
Trichinopoly District.	River.—Agunda Cáveri	50	....	Native basket boats, which carry from 1 to 3½ tons.	These boats convey large quantities of iron ore from Salem to Porto Novo, cut stone from Trichinopoly to Tanjore District, and a large local traffic in grain, betel-nuts, pepper and tamarind; rafts of bamboo and firewood are also carried down these rivers. The current is too strong for loaded boats to make way against the stream, and the usual practice is to break up the boats on arriving at their destination, and to carry back the leather covering to make fresh boats on their return to their own village. The Veyacondaun has been entered as a navigable channel, because the natives make use of it in bringing supplies into Trichinopoly by small basket boats, but it is only of local importance and traffic from a distance is brought down by the river Cáveri.
	Do. Coleroon		....	Do.	
	Channel.—Weyacondaun		....	Do. to carry 1 ton.	

District.	Name of Rivers, Canals, or Channels.	Extent in miles.	Whether navigable all the year round, or for what months.	For what class of boats or steamers, and tonnage.	Remarks.
Trichinopoly District.					The following is an abstract statement of the height of the water at the Cáveri bridge :— In April it averaged 1 foot. In May do. from ½ to 3 feet. In June it ranged from 2 to 6 feet. In July do. from 2 to 9 feet. In Aug. { 1859 do. from 2 to 5 feet. / 1860 do. from 4 to 9½ feet. In Sept. { 1859 do. from 1 to 4½ feet. / 1860 do. from 3 to 5½ feet. In Oct. { 1858 do. from 4 to 11 feet. / 1859 do. from 1 to 5½ feet. In Nov. { 1858 do. from 3 to 11 feet. / 1859 do. from 1 to 3 feet. In Dec. { 1858 do. from 3 to 11 feet. / 1859 do. from 1 to 3½ feet. In Jan. { 1859 do. from 2 to 6½ feet. / 1860 do. below 1.
	Channel through the Paumben Straits.—Reef Channel from the North Boundary to the Southern entrance post.	¾	....	Vessels from 50 to 500 tons, provided they draw not more than 11 feet of water at high neap, and 12 feet at spring-tides.	This is known as the Paumben Channel, and navigable throughout the year, except at such periods when wind and current prevent them, and this is only for a few days at a time. Square rigged vessels of all descriptions use this channel and all sorts of Native dhonies. Steamers also, with 11 feet draught water. The Ceylon Government steamer "Pearl," drawing 10 feet, passes through twice a month.
	Do. Sand Bank....................	½	....	Do. do.	
Madura District.	Channel.—Keelakurray.	......	....	....	This channel is very narrow, and the same remarks as to the tides, &c., apply equally with the Paumben Channel. The distance from Paumben to Keelakurray is 30 miles. A Pilot is required for the whole of this distance. Buoys have been forwarded from Madras, and were about being laid down to mark the channel.

Tinnevelly District.

The District Engineer of Tinnevelly, Captain Winscom, states as follows:—

"That there is no river or Canal on which any navigation is carried on either during the dry or any season, but a most important canal navigable throughout the year, joining several of the most prosperous towns of this very remunerative District (the third most profitable, I believe, in the Madras Presidency) might be made at a comparatively moderate cost. The idea has already been mooted by the present Chief Engineer, Colonel Horsley. It consists of forming a vast reservoir in the upper valley of Tambrapoorney, by throwing across the river a dam at some point above the falls of Paupanasem, and so preventing to a large extent the immense waste which annually takes place by the waters of the Tambrapoorney during flood flowing uselessly into the sea. But before any material opinion can be given, some more sections and measurements require to be taken. Of the possibility and advantage of the construction, there is said to be no doubt; and as the water saved would be available, and perhaps sufficient for both irrigation and navigation, the expenditure necessary will be well laid out. This District returns some thirty-three lacs yearly as revenue, of which the irrigated lands under Tambrapoorney alone return eight lacs. I cannot say what the cost of the reservoir and of deepening the existing channels, making locks, &c., and fitting them for navigation would be, but I believe I am well within the mark when I say, that it will not exceed one year's revenue which the District yields to Government. The existing channels which I would propose to make navigable, would commence at the large and thriving town of Culladacoorchy, and would pass down the Canadim Channel through Shermaden (a place of considerable importance). A little below the Anicut where the Paulien Channel commences, a cut may very easily be made into the Paulien Channel along which the navigation would pass *viâ* the Cantonment of Palamcottah and near Tinnevelly, until another new cut would take it into the Keelakal Channel, whence it would pass to Saiveigundom. At Saiveigundom the large Anicut and Channels, proposed by Colonel Horsley, would enable boats to pass northwards to the harbour of Tuticorin, and southwards to the flourishing sea port town of Colasagaripatam. Excepting in the dam above Paupanasem no considerable engineering difficulty

District.	Name of Rivers, Canals, or Channels.	Extent in miles.	Whether navigable all the year round, or for what months.	For what class of boats or steamers, and tonnage.	Remarks.
Tinnevelly District.					would be involved. The channels now existing would simply have to be deepened, and locks made at intervals. The whole question lies in the supply of water obtainable in the reservoir, and the management of the sluices, the same. The reservoir would not only afford the navigation adverted to, but would also insure the safety of the immense rice crops now watered by the existing channels from the Tambrapoorney. It would efficiently prevent such a lamentable failure as we have this year to deplore, and would by so doing go far at once to re-pay the outlay which would be necessary. I am loath to culpify myself by any premature statement of the number of cubic yards of water which we could save or the number we exactly require. At present I think I am justified in saying that the project is one pregnant with good, and that I have no doubt in my own mind as to the immense advantages of the scheme to Government, both directly and indirectly."
Coimbatore District.					The District Engineer reports as follows:—" There are no navigable channels or canals in this District, and the only river navigated at any time is the Cáveri and even that scarcely deserves the name of navigation. The Cáveri is navigable only during the freshes, at which time boats laden with cloths, dry grain, and oil seeds, are sent to Trichinopoly from various places along the banks of the river, the highest point being Neringapet. The boats are the common round basket boats covered with leather. The largest of them carry from 3,000 to 5,000 lbs. or from $1\frac{1}{2}$ to $2\frac{1}{2}$ tons. When they are unloaded at Trichinopoly the basket work is sold, and the leather carried back by the boatmen. It would be almost impossible to bring the boats back by the river. No reliable information is obtainable as to the total number of boats, or the total weight sent down within a year, but owing to the difficulties of the navigation the amount is inconsiderable. None of the irrigation channels are navigated. They are all too tortuous, and

most of them are dry for a considerable portion of the year. I do not think any of them could be made navigable, except at a great cost, and even then the navigation would be very imperfect. I doubt the possibility of combining successfully "irrigation" and "navigation" in channels such as those in this District. The supply of water is generally so limited that the greatest care must be exercised in its distribution, giving it for a few days to one part of the channel, then for a few days to another, and so on. Even if the quantity of water were made sufficient, as it might be by constructing reservoirs, the channels are in other respects unsuited for navigation and could be made suitable only by making such alterations as would be almost equivalent to the construction of proper still-water canals. There are four rivers in this District, the Cáveri, the Bhowani, the Ambravutty, and the Noyel. It would, in my opinion, be folly to attempt to make any one of them navigable, even with the certainty of water supply that reservoirs would give. The navigation of the Cáveri between Neringapet and Collegal is impracticable on account of its rough, rocky bed and great fall. The falls of the Cáveri are within this reach between Neringapet and Errode. The fall is comparatively trifling, but the rocky bed continues, though of a different character, being in flat beds with few projecting or detached rocks. Below Errode the bed is sand, the river is wide and shallow; the sand banks and of course the principal channels, shift their position at every flood. In its present state the navigation of this river with any other except the round basket boats, would be impossible. Nothing could prevent a boat of any other shape going on shore at the bends of the stream where it is deflected from side to side, or from a sand bank in mid channel. If navigation was desirable in the direction of the Cáveri a still-water canal should be made on either bank, but the Railway now being made from Negapatam to Errode, will probably be sufficient for the traffic in that line for many years to come. The Bhowani and the Ambravutty rivers are similar in character to the Cáveri so far as respects their floods, however as they have their sources near and in high mountainous regions (the Neilgherries and Anámalais) they are sudden, uncertain, and

Coimbatore District.

District.	Name of Rivers, Canals, or Channels.	Extent in mile.	Whether navigable all the year round, or for what months.	For what class of boats or steamers, and tonnage.	Remarks.
Coimbatore District.					destructive. I consider that neither of these rivers could readily be made navigable, but that a still-water canal in the valley of each could be readily made, and would greatly improve the District and repay the cost of construction. I have marked in yellow where the canals should be carried. Both valleys are extensively cultivated, they are all well watered, and the soil is rich and deep. All they require is to be brought in connection with the railways, and this would be accomplished by the lines marked in yellow. The canal along the Bhowani would connect that valley with the railway from Madras to Beypúr at Errode; and also at the same place with the lines from Negapatam. The canal in the Ambravutty valley would connect it with the railway from Negapatam at Caroor. Neither of these canals would compete with either of the railways and would be important feeders to both. The construction of these canals would involve that of at least one reservoir for each valley. There is no necessity to consider the circumstance of the Noyel valley, as it is too close to the lines of railway to warrant the construction of a canal in it."
Salem.					There are no canals in this District, nor are there any rivers or channels either navigable or capable of being made so. The Cáveri which forms the western and southern boundary of the District for 112 miles, is navigable during the months of June, July, August and September, for shallow basket boats, the largest of which do not exceed $1\frac{1}{2}$ ton burden, and during that time about 20 tons of grain, firewood and charcoal, are carried down the river, and beyond the limit of the Salem District. Large rafts of timber are also floated down during the months above-named, from the jungles in the north-west part of the District. The average fall of the river is supposed to be 3 feet per mile.

North Canara.	River.—Kaleenuddy or Sedasheghur river.	20	All the year round......	By vessels of 60 or 70 tons burden and smaller craft drawing 4½ to 5 feet of water, also to 10 feet.	The Kaleenuddy or Sedasheghur river is navigable as high as Mullapúr, by vessels of 60 or 70 tons burden by tiding it up and down. It is particularly free from obstructions, though the channel is often very narrow, and vessels of the above size could only navigate with a leading wind. Smaller craft drawing 4½ to 5 feet of water can get up and down the river with ease except at dead low-water, and anything drawing 3 feet could work up or down, provided they are not more than 60 or 70 feet in length. The vessels used carry from 2 to 10 corges, or from 3 to 15 tons, and draw from 2 to 10 feet; whereas properly constructed river crafts should draw from 3 feet to 3 feet 6 inches and carry 25 tons.
	Do. Gungawalli	12	Do.	By vessels of 60 or 70 tons burden drawing 4½ to 5 feet of water, also to 10 feet.	The above remarks apply equally to the Gungawalli as far as Goodabulli only 12 miles, and to the Tuddri River as far as Oopinputnam 18 miles. The Gungawalli River is used largely for the export of timber, as it drains a valley full of fine jungle wood, and with some good teak, but its bar has such a bad reputation that general traders do not frequent the small port at its mouth.
	Do. Tuddri.......	18	Do.	Boats measuring in length 35feet, breadth 16 feet, depth 7 feet, and of 15 tons burden.	The District Engineer is under an impression (derived from native reports, as to the state of this stream during monsoon months) that its navigation and flow of tide-water might be considerably extended, so as very beneficially to effect the trade from the interior, by the Neelcond and Hossu Ghâts, and allow of salt depôts being established nearer their foot than Oopinputnam, which, as its name imports, has so long been a chief place of resort for that commodity. It was supposed that Lieutenant A. D. Taylor of the Indian Navy, would have surveyed this and all the other navigable rivers of Canara before quitting the coast, but the expectation was not realized, and the blank is felt.
	Do. Guersoppah or Honore........	18	Do.	Boats carrying four corges or about 6 tons of cargo, and drawing as much as 6 and 7 feet at very high water.	This river is obstructed by bars, there are no less than seven between Honore and Guersoppah, on which at low-water there is seldom more than from 18 inches to 2 feet of water; boats carrying 4 corges or about 6 tons of cargo can tide it up to Guersoppah, they are said to draw about 5 feet of water. At very high tides those drawing as much as between 6 and 7 feet do get up to the salt Kottárs at Guersoppah, but nothing drawing more than 4 feet

District.	Name of Rivers, Canals, or Channels.	Extent in miles.	Whether navigable all the year round, or for what months.	For what class of boats or steamers, and tonnage.	Remarks.
North Canara.					can navigate regularly. The following are the registered dimensions of the largest size boats on this river, which can get up from Honore to Guersoppah, a distance of 18 miles, viz :— Length 26 feet, breadth 10½ feet, depth 3 feet. Length 21⅓ feet, breadth 9½ feet, depth 3 feet.
	River.—Condapúr........	33	....	Navigable by canoes....	The Condapúr Rivers are only navigable by canoes up to Halaůdy and Wundasi salt depôt; and towards the end of the hot season there is often great difficulty in getting the smallest of them to these places. The navigable portion of the two rivers which unite at Condapúr, are limited to the length of about 15 or 18 miles respectively, and that only by boats of half a corge or ¾ of a ton and under. Nor can any thing be looked for in the way of improvement or extension of this navigation. A report on the navigable rivers of North Canara would be incomplete without some notice of three projects for extending their usefulness, viz., the Gungawalli, Tuddri, and Cumpta Rivers, by canals of very short lengths and easy construction, connecting them with each other; and so rendering the course of each and the various ports of Gungawalli, Tuddri, Cumpta, and Honore, accessible to the produce brought down from the interior, by no less than three first class and two second class lines of Ghát roads, viz., Arbyle, Devimunny, Guersoppah, Neelcond, and Hossu. One of these connecting Tuddri and Cumpta, three miles long, and estimated to cost only Rupees 36,021, was actually sanctioned (on the 12th August 1856), and preparations made to commence it just when the mutiny broke out, and stopped every thing. The other two projects, are firstly, for connecting the Gungawalli and Tuddri Rivers by a cut of three miles, only estimated at Rupees 62,010; and secondly, for connecting Cumpta with the Huldipúr River and so with the Honore, through some six miles of very easy ground, estimated at

North Canara.					Rupees 25,810. These were sent out with the District Budget Lists, but have not as yet received any notice. The last mentioned would have the effect of rendering Honore, the present head-quarters of the Judicial and Revenue authorities, accessible otherwise than by sea, which it cannot now be said to be. Practically, what can best be done for the improvement of river navigation in North Canara, is firstly, the carrying out of these three small canals, at an estimated cost of Rupees 1,23,841, and so forming a connected line of river and canal navigation of seventy miles. This project must be carefully distinguished from much more ambitious, more costly and less possible scheme of a West Coast canal, throughout both Districts of North and South Canara, of which however if ever executed, it will supply by far the most useful links at the least comparative cost. Secondly, the accurate survey of all five rivers left unfinished by Lieutenant Taylor, by some one as well fitted for the work as was that scientific and active Canal Officer.
South Canara.	River.—Naitravutty	25	....	The boats used on the rivers in this District are canoes of hollowed trees. Their loads vary from 1 to 4 tons.	Navigation is very difficult in the rains when the rivers are full, owing to the great fall of their beds and the consequent velocity. During a month or two after the monsoon, navigation is carried on by boats of light draught threading their way through the barriers of rock. During the dry weather they are only navigable within the action of the tide, which varies from 5 to 7 miles from the sea. The only exception to this is the Naitravutty, which is dangerous from its velocity during the freshes, but having better sources it is navigable by light boats throughout the dry weather almost to the foot of the Ghâts. Between Buntwall and Mangalore the navigation down-stream is generally feasible throughout the year, but there are many rocks, and the sands shift very much, so that it is avoided as much as possible in the freshes. On this line and for this distance, there is a very considerable traffic to and fro; on other lines the number of boats is very inconsiderable, 15 to 20 per annum, and all one way. There is only the surplus produce of a number of valleys in the forest to come down; the principle cultivation is nearer the sea.
	Do. Comerdari	10			
	Do. Chendragerri	10			
	Do. Goorpúr	6			
	Do. Arjah	12			
	Do. Sheetanuddy	......			
	Do. Sovernanuddy	......			
	Do. At Mulpy	10			
	Do. Siray	5			
	Do. At Munjaishwar	4			
	Do. At Moolky	3			

District.	Name of Rivers, Canals, or Channels.	Extent in miles.	Whether navigable all the year round, or for what months.	For what class of boats or steamers, and tonnage.	Remarks.
Malabar.	Back-water and Canal.—Cochin and Ponány.	58	....	The boats used are on an average 40 feet in length, and 2 to 3 feet deep, and carries from 2 to $2\frac{1}{2}$ tons.	There are no steamers in use in the Malabar District. The Coast Canal in Malabar does not form an unbroken communication from north to south throughout the whole extent of the sea-board in this District, but only extends throughout a portion, and a part of its course is intercepted by back-waters and rivers. The portion of the coast which has no canal is the section between Baddagherry and Balliapatam, Pooraparamba and Beypúr, a distance of 36 miles. The District Engineer, however, does not consider that there would be any very great engineering difficulties in extending the water navigation over this place also. The canal and back-water from Cochin to Balliapatam are practicable throughout for boats having a draught of 2 feet, and in portions even of 3 feet, though shoals occur at places which impede the navigation, and which has to be renewed in many instances by the boatmen themselves.
	Canal.—Ponany and Tanúr............	12	....	The boats used are on an average 30 feet in length and 2 feet in depth, and carry rather less than 2 to $2\frac{1}{2}$ tons.	
	Canal and Back-water.—Calicut and Baddagerri Canal and back-waters on the line from Cannanore to Kavoy.	26 30	....	Boats used are on an average from 30 to 50 feet in length, and from 2 to 3 feet deep, and carry from 1 to $5\frac{1}{2}$ tons.	
	River.—Ponány........................	40	....	Boats carrying from 2 to 3 tons.	Out of this system of back-water and canal communication we have therefore 118 miles in length of the former, and 41 miles of the latter navigation. These totals have been arrived at as follows, the aggregate amount in miles of each section of the navigation being shown:—
	Do. Malliapúram....................	25	....	Boats carry rather less than 2 to 3 tons.	
	Do. Beypúr........................	30	....	Boats carry up to 5 tons, and the Iron Company boats from 10 to 15 tons, but only for a few miles above the mouth.	
	Do. Yellatoor........................	10	....	Boats carrying from 2 to 5 tons.	
	Do. Moorat........................	10	....	Do.	
	Do. Mahe........................	10	....	Boats carry rather less than 2 to 5 tons.	
	Do. Balliapatam........................	10	....	Boats carry from 2 to 5 tons, though larger boats ascend as far as Balliapatam 4 miles from the mouth.	
		261			

	Miles. Back-water.	Miles. Canal.
From Cochin to Chowghát..................	54	0
,, Chowghát to Ponány..................	0	16
,, Ponány to Cootai..................	5	0
,, Cootai to Pooraparamba..................	0	12
,, Kudalpoondy to Beypúr..................	6	0
,, Beypúr to Calicut..................	12	0
,, Calicut to Yeelatúr..................	0	8
,, Yeelatúr to Pyolly..................	15	0
,, Pyolly to Moorat..................	0	2
,, Moorat to Báddagerri..................	10	0
,, Balliapatam to Pyangudi..................	10	0
,, Pyangudi through Canal..................	0	3
,, Sultan's Canal to northern boundary.	6	0
Total......	118	41

Statement showing the annual amount of tonnage and number of vessels entering the River Mouths and Ports, with the size of the vessel:—

Name of Port.		Aggregate yearly tonnage.	Aggregate number of vessels.	Remarks.
Cannanore Port.	Balliapatam	3,475	158	
	Kawai	1,147	81	
Tellicherry Port.	Durmapatam	344	56	1 to 7 tons, with or without cargo.
	Egar	48	4	
	Kalai	5,154	420	
Baddagerri Port.—	Kotakal	650	84	
Calicut Port.	Yellatúr	289	40	1 to 8 tons, with or without cargo.
	Beypúr	22,650	408	1 to 140 without, and 1 to 30 tons with cargo.
	Ponány	20,336	1,231	
	Chowghát	998	80	1 to 120 without, and 1 to 40 tons with cargo.
	Cochin	69,296	1,693	
Total Tons		1,24,387	4,255	

(Signed) W. I. BIRDWOOD, Lieut.-Colonel,
Deputy Chief Engineer in charge of Central Office of Public Works.

Memorandum showing the tonnage of vessels and boats actually in use at the several Rivers and Canals in the District of Malabar.

Táluqs.	¼ Ton.	½ Ton.	¾ Ton.	1 Ton.	2 Tons.	3 Tons.	4 Tons.	5 Tons.	6 Tons.	7 Tons.	8 Tons.	9 Tons.	10 Tons.	Total.
Kawai	4	37	13	4	36	7	35	2	...	...	...	...	...	138
Cherikal	12	54	28	27	26	14	1	2	...	...	...	...	2	166
Kotteyam	17	8	...	2	1	...	1	...	...	...	...	...	...	29
Kartenad	27	43	3	5	2	...	...	...	...	...	...	...	...	80
Karambenad	66	88	27	19	2	...	1	...	...	...	...	...	...	203
Calicut	29	36	12	8	1	6	3	...	...	...	...	...	...	95
Ernad	24	23	5	6	9	16	15	6	...	...	...	...	...	104
Shernad	112	72	13	21	28	31	66	43	13	4	4	6	3	416
Vetatnad	4	25	2	16	5	3	...	5	...	...	...	...	...	60
Kutnad	6	20	4	4	51	32	43	29	9	1	...	...	...	199
Chaokad	30	30	8	35	88	17	1	1	...	...	...	...	1	211
Nediniganad	6	6	1	12	23	5	2	10	12	1	...	1	...	79
Walluvanad	4	2	...	4	22	9	2	4	1	...	...	...	...	48
Palghát	...	2	3	2	2	...	...	...	...	...	...	...	...	9
Temulpuram	6	4	2	1	..	...	...	...	...	...	...	...	...	13
Wáinad	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cochin	70	20	14	17	15	1	...	...	...	1	...	...	...	138
Total number of boats	417	470	135	183	311	151	170	102	35	7	4	7	6	1,988

Central Office D. P. W.,

Chepauk 17th July 1861.

(Signed) W. I. BIRDWOOD, Lieut.-Colonel,
Deputy Chief Engineer in charge of
Central Office of Public Works.

No. 14.

ORDER THEREON, 5th September 1861, No. 1,663.

Ordered to lie over.

(Signed) J. D. SIM,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 5th *September* 1861. 1875

No, 15. Read the following Endorsement of the Chief Engineer, dated Chepauk, 21st August 1861, No. 4,139 :—

Read the following letter from Major J. C. ANDERSON, District Engineer Kistna, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer Northern Circle, dated Bezwada, 23rd July 1861, No. 66.

	RS.
Between Patamata and Weyoor	1,130
Between Weyoor and Sultanagrum bridge	800
Repairing road-way of the Sultanagrum bridge.. ..	240
Total.. ..	2,170

SIR,

I have the honor to submit three estimates as per margin, for the repairs of the road from Masulipatam to Bezwada, and to solicit sanction for the expenditure from the amount allotted to roads unprovided with special grants.

---

3 Estimates.

* Rupees 6,800, Budget Statement No. 3 of 1861-62.

1. Submitted to Government with the Chief Engineer's recommendation that sanction be granted for the execution of the works, estimated in the aggregate at Rupees 2,170, from the sum* allotted to the Kistna District for roads not provided with special grants.

2. It is a question whether it would not be better to abandon the road in question on the completion of the Canal from Masulipatam to Bezwada, as all the heavy traffic will then forsake the road for the Canal; and for light traffic, the Canal bank, if gravelled, would probably answer every purpose.

3. The attention of the District Engineer will be called to the subject, but in the meantime it is necessary to keep the old line of road in repair.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 16. ORDER THEREON, 5th September 1861, No. 1,664.

1. The estimates amounting in the aggregate to Rupees (2,170) two thousand one hundred and seventy, are sanctioned for execution out of the fund mentioned in paragraph 1 of the Chief Engineer's endorsement.

2. The Government will expect to receive a report hereafter on the question adverted to in paragraphs 2 and 3.

(Signed) J. D. SIM,
Secretary to Government.

No. 17. Read the following Proceedings of the Madras Government in the Military Department, dated 26th August 1861, No. 2,978 :—

Communicating Extract from the Proceedings of the Government of India, requiring that all Military Subordinates permanently attached to the Public Works Department, shall within six months provide themselves with the undress therein described. } (Vide Military Proceedings, 26th August 1861, Nos. 433-434.)

No. 18. ORDER THEREON, 5th September 1861, No. 1,665.

Ordered to be communicated to the Chief Engineer.

(Signed) J. D. SIM,
Secretary to Government.

No. 19. Read the following Proceedings of the Madras Government in the Military Department, dated 30th August 1861, No. 3,030:—

Communicating Home Despatch, requiring that the orders regarding the grant of furlough to Europe to Non-Commissioned Officers will be strictly adhered to. (Vide Military Proceedings, 30th August 1861, Nos. 505-506.)

No. 20. ORDER THEREON, 5th September 1861, No. 1,666.

Ordered to be communicated to the Chief Engineer for information.

(Signed) J. D. SIM,
Secretary to Government.

No. 21. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,214:—

SIR,

1. With the accompanying letter the District Engineer submits two estimates for a bridge to be constructed over the Masulipatam Canal at the Village of Chintaguntapalum, the one composed wholly of timber, the other of timber superstructure and masonry abutments. The relative cost of the two structures is Rupees 9,425 and 8,350.

1 Letter from District Engineer Kistna, No. 59, dated 15th July 1861.
1 Estimate.
1 Report.
1 Plan.

2. The timber and iron will be taken from that belonging to the Kistna bridge, and would amount in value in the one case to Rupees 6,470, and in the other to Rupees 2,850.

3. The District Engineer represents it to be most desirable that this work should be prosecuted at once, as until it is constructed there must be a break in the communication between the Aukúmurrú lock and the sea. He states that arrangements have been made for clearing out an old channel south of the Petta as far as the Petta Basin, from whence communication with the sea at high water already exists, and that when this is complete, there will be communication with the Aukúmurrú lock and Bezwada, provided the break which now exists, and to remedy which the proposed bridge is required, is removed.

4. I beg to recommend, therefore, agreeably to the District Engineer's request, (in order that the value of the timber transferred from the Kistna bridge may be credited to that work) that the full amount* required for the bridge with masonry abutments, which I consider the more preferable of the two, may be sanctioned from the Reserve fund of the current year.

* Rupees 8,350.

5. The estimates bear the countersignature of the Acting Collector and have undergone the necessary examination in this Office.

No. 22. ORDER THEREON, 6th September 1861, No. 1,667.

1. The estimate of Rupees (8,350) eight thousand three hundred and fifty is sanctioned as recommended by the Chief Engineer; the expenditure to be defrayed out of the general funds of the Kistna District.

2. A sketch Map of the locality illustrative of the necessity of the bridge should have been submitted.

(Signed) J. D. SIM,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 1877.
6th September 1861.

No. 23. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 21st August 1861, No. 4,140:—

SIR,

1 Letter from District Engineer Godavery, No. 376, dated 8th July 1861.
1 Estimate.
1 Report.
1 Plan.
1 Sketch.
* Rupees 6,800.
Item No. 114 of Budget List No. 2 of 1860-61.

1. I have the honor to forward the accompanying letter, plan, and estimate,* from the District Engineer, Godavery, requesting permission to alter the dimensions of the Calingulah to be built on the High Level Canal near the Lock at Ellore from those proposed (or from 30 to 60 feet) and included in the original estimate for that Canal sanctioned by Government on the 12th November 1856, No. 2,109.

2. The Calingulah is for the purpose of providing an escape for surplus water that may enter the Canal during unusual rains, but as there are a considerable number of tanks situated above the Canal, and may, on the occasion of unusual rains, be breached. Captain Stoddard is of opinion, that it would be desirable to increase the length of the Calingulah as it can be effected without any increase of cost by fixing its site at a convenient locality, viz., the eastern branch of the river Tunnilair, which thus becomes the tail-race.

3. Though the water entering the High Level Canal from the river Kistna is of course regulated and controlled at the head sluices, yet there can be no question of the desirability of providing escapes for water which may enter the Canal from the country above it, and the recent heavy rains in the Godavery and Kistna Districts have shown that notwithstanding the provision made for carrying the drainage *under* the Canal, a considerable body of water finds its way *into* it, and causes the banks to be breached. I beg therefore to recommend that the alteration recommended by Captain Stoddard be complied with, especially as it entails no additional cost.

No. 24. ORDER THEREON, 6th September 1861, No. 1,668.

† ItemNo. 104, in Statement No. 2 of Budget for 1861-62.

The proposition made in this letter is sanctioned on the understanding that the original estimate (Rupees 2,14,385)† for the Canal referred to is not thereby exceeded.

(Signed) J. D. SIM,
Secretary to Government.

No. 25. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,229:—

SIR,

1 Letter from District Engineer, Vizagapatam, No. 1,319, dated 26th February 1861.
1 Do. from Collector, No. 144, dated 21st February 1861.
1 Do. from District Engineer, No. 360, dated 13th July 1861.
1 Do. do. No. 1,535, dated 18th April 1861.
2 Estimates.
2 Reports.
2 Plans.
1 Sketch.
1 List with one Extract.

1. I have the honor to forward the accompanying plans and estimates received from the District Engineer, Vizagapatam, for constructing a Calingulah and two Sluices to the Pedda Cheroo of the village of Cheedicadah situated in the Golconda Tâluq.

	RS.
1 Estimate, Calingulah..	2,180
1 Do., 2 Sluices @ 240 each..	480
	2,660

2. The estimates amounting to Rupees 2,660, while the highest revenue of the tank has been only Rupees 733, I referred the matter back to the local authorities for re-consideration, and the District Engineer in reply states, that besides an increase in the revenue of Rupees 154, there will be a saving in remissions

which have amounted to Rupees 800 in the last five years, while the whole revenue under the tank will be lost until it is repaired. Merely to close the breach he represents will be of no use, as the first heavy fresh in the stream, across which the bund of the tank has been thrown, will of a surety breach it again, and he therefore defers its repair until the Calingulah now asked for can be re-built. He states that he has personally inspected the locality and approves of the site indicated in the accompanying sketch. As a total revenue independent of remission of Rupees 887 depends on the construction of these works, I beg to recommend their being sanctioned from the Reserve fund of the current year."

3. The estimates which are countersigned by the Collector have been duly examined in this Office and are approved.

No. 26. ORDER THEREON, 6th September 1861, No. 1,669.

The estimates amounting to Rupees (2,660) two thousand six hundred and sixty submitted with this letter are sanctioned; but as the Reserve fund will not be able to bear the outlay, the Chief Engineer will state from what other source it can be defrayed.

(Signed) J. D. SIM,
Secretary to Government.

No. 27. Read the following Proceedings of the Board of Revenue, dated 8th August 1861, No. 4,276:—

Read again letter from the Officiating Collector of Trichinopoly, dated 4th February 1861, No. 17.

(In Cons. 9th February 1861, My. No. 343.)

Read also the following letter from the Head Assistant Collector in charge, dated 6th July 1861, No. 106.

(In Cons. 9th July 1861, No. 4,231.)

1. Resolved that the foregoing letters be submitted for the consideration and orders of Government.

In Cons. 5th March 1857, No. 593.

2. In paragraph 5 of Extract Minutes of Consultation, dated 9th February 1857, No. 286, Public Works Department, Government authorized the adoption of the arrangements proposed for the maintenance of the Lalgudi channels. An Establishment was then recommended by the District Engineer which was to cost Rupees 3,996 annually, and the Irrigation cess was estimated to produce Rupees 4,000 yearly. The Government in the same paragraph directed that the collections on account of the cess should be made distinctly from those of Land Revenue and credited under a distinct head "Irrigation Cess," and that payments on account of Establishments should be made from the public funds and debited to the same head "Irrigation Cess."

To the Chief Engineer, dated 31st May 1858, No. 212.

3. A recommendation was subsequently made by Lieutenant Ryves for a modification of the Establishment by which the permanent Establishment was to cost Rupees 3,204 per annum, leaving Rupees 792 per annum out of 4,000 Rupees for the pay of extra coolies required for working at the Kurumbus, or on other urgent occasions. He recommended at the same time that in carrying this out practically, the charge for Establishments should be treated as an annual charge, and that the Civil Auditor should be authorized to pass the monthly bills without reference to the number of individuals employed in any one month, and restricted only by the rule that their aggregate amount for the year should not exceed Rupees 4,000, being the amount of assets available. In paragraph 19 of Extract Minutes of Consultation, dated 30th October 1858, Public Works Department, No. 2,306, Government simply alluded to this recommendation, and in paragraph 20, they sanctioned the proposed modification of the Establishment.

In Consultation, 18th November 1858, No. 5,020.

4. The Channel Conservancy Department was originally under the District Engineer, during which time the bills for extra charges incurred on account of the Lalgudi Channels were not submitted to the Civil Auditor for audit, but the charge was debited to the funds allotted to the District in the Budget for Irrigation repairs, and passed with other bills for these repairs by the Chief Engineer. The Establishment charges were, the Board presume, submitted to and passed by the Civil Auditor, though it is not expressly stated in the Collector's letter. In July 1860, the conservancy was transferred to the Revenue Department, under the orders contained in paragraph 5 of Sir Charles Trevelyan's Minute, dated 28th June 1860. In November and December 1860, the Collector incurred an extra charge of Rupees 50-14-2 on account of the channels, out of the reserve fund of Rupees 792 from Rupees 4,000, and submitted the bills to the Civil Auditor, but that Officer having returned them with a remark that the charge is not susceptible of audit in his Office, the Collector has forwarded the bills to the Board for the sanction of Government.

5. From the Memorandum submitted by the Collector with the second letter above recorded, it would appear that the collections of the Irrigation cess from 1857-58 to 1860-61 amounted to Rupees 12,765-1-2, and the charges to Rupees 15,607, and to this if the contingent charges which were incurred by the District Engineer from 1857-58 to 1859-60 from funds allotted for Irrigation repairs are added, the amount of charge will be Rupees 16,427-10-7. Thus the aggregate charges exceed the collections by Rupees 3,662-9-5, and even the annual grant, by Rupees 427-10-7. In 1860-61, the whole expenditure was considerably below the annual grant and also the actual collections. If the Government intend that the actual charges should be met from the cess fund alone, it will be necessary to regulate the charges accordingly, but if it is intended that the annual grant of 4,000 Rupees should be continued and made use of for the maintenance of the channel, whatever may be the amount of collections, the Board request that the Civil Auditor may be authorized to pass the charge within the amount on account of both Establishment and Contingent charges, and they also solicit the special sanction of Government for Rupees 50-14-2, objected to by the Civil Auditor. If the expenditure is to be limited to the cess collections made in each year, the audit of the Civil Auditor will be unnecessary.

(A true Extract.)

(Signed) W. HUDLESTON,
Secretary.

No. 28. ORDER THEREON, 6th September 1861, No. 1,670.

1. With reference to paragraph 5 of these Proceedings the Government observe that the whole cost of the Conservancy Establishment maintained for the Lalgudi Channels in Trichinopoly, and the incidental charges should be regulated by the amount of Irrigation cess collected; and that as recently directed in paragraph 2 of their Order of the 13th August last, No. 1,623, in the case of the Conad Táluq, it is not necessary that the accounts connected with the cess should pass through the Audit Office, as the cess forms a special local fund subject to the audit of the Board of Revenue,

2. If the charge of Rupees 50-14-2 for which the special sanction of the Government is now requested cannot be met out of the cess funds, the Collector may disburse it from the public treasury, and in such case, the Civil Paymaster is hereby authorized to pass the charge.

(Signed) J. D. SIM,
Secretary to Government.

No. 29. Read the following Proceedings of the Madras Government in the Revenue Department, dated 4th September 1861, No. 1,761 :—

Requiring all the Heads of Departments to state invariably when submitting propositions for any expenditure whether it is provided in the Budget or not. (Vide Revenue Proceedings, 4th September 1861, No. 33.)

No. 30. ORDER THEREON, 6th September 1861, No. 1,671.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 31. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,227 :—

SIR,

1. I have the honor to forward for submission to Government, a plan and estimate amounting to Rupees (750), seven hundred and fifty, for constructing a masonry dam across the Mullataur river, on the north bank of the Ponniar, in lieu of the present earthen one at Udalapett in the District of South Arcot.

6 Letters from District Engineer, Nos. 60, 89, 132, 156,209, and 42, dated 6th July, 11th August, 25th October, 24th November 1860, and 9th March, and 23rd June 1861.
1 Plan, 1-5957.
1 Sketch, 4-3464-61.
1 Abstract estimate, Rupees 550.
1 Specification, 2-5957-61.

2. Materials to the value of Rupees 200 were prepared in 1857, agreeably to an estimate of Rupees 349, made by the Tahsíldár of Cuddalore Táluq, and handed over to the new Department of Public Works for execution, but owing to a reduction in the allowance for irrigation repairs in that year, the work was not proceeded with, but a bill for the materials was forwarded to this Office and passed.

3. It was subsequently discovered that the original estimate* was quite insufficient for a substantial work such as that now contemplated, and Captain Foord accordingly prepared the accompanying revised estimate, from which it will be observed a deduction of Rupees 200 is made on account of old materials which are available for use, leaving Rupees 550 to be provided.

* Rupees 349.

4. The earthen dam is constantly† carried away and requires renewal, and as the cultivation of three villages‡ depends on it, I consider that it would be true economy to construct the proposed masonry work as originally recommended by the District Engineer in his letter No. 60, dated 6th July 1860, herewith forwarded. The Tahsíldár of Cuddalore is also of opinion§ that if a masonry dam were built, the present Ayacut revenue|| would not only be secured, but that there would be an increase of Rupees 192.

† *Vide* letters Nos. 60 and 132, dated 6th July and 25th October 1860.
‡ Udalapett.
Milalingiputt.
Kinnaramangalum.
§ *Vide* letter from District Engineer, No. 209, dated 9th March 1861.
|| Rupees 1,880.

5. In 1833 and in previous years, remissions were made to the Ryots, but the amount is not known. In Fasli 1867, a remission of Rupees 1,170 was allowed to the three villages of Udalapett, Milalingiputt and Kinnaramangalum.

6. A new head to the channel and a small embankment, as shown on the accompanying sketch costing about Rupees 92, are also provided for in the revised estimate which has the approval of the Collector.

7. The estimate has been examined in this Office and found correct. The rates given therein are those prevailing in the District of South Arcot, and are sufficent to carry out the work. I request therefore that sanction may be accorded for the immediate execution of the work, the amount Rupees 550, exclusive of the value (Rupees 200) of materials already collected and now available to be defrayed from the general repair funds assigned to that District for expenditure during the current official year.

No. 32. ORDER THEREON, 6th September 1861, No. 1,672.

For the reasons stated in this letter, the Government approve of the proposed construction of a masonry dam across the Mullataur in South Arcot, under the estimate of 750 Rupees submitted for this purpose. As materials to the value of 200 Rupees are already collected and available, the estimate is reduced to 550 Rupees ; and this latter sum is now, on the recommendation of the Chief Engineer, sanctioned from the general repair funds at the disposal of the District Engineer in 1861-62.

(Signed) J. D. SIM,
Secretary to Government.

No. 33. Read the following Proceedings of the Madras Government in the Public Department, dated 3rd September 1861, No. 1,273 :—

Requiring the District Engineer Presidency, to state in communication with the People's Park Committee, what funds he will require for the erection of proper receptacles for all the Carnivora. } (Vide Public Proceedings, 3rd September 1861, Nos. 9-10.)

No. 34. ORDER THEREON, 6th September 1861, No. 1,673.

Ordered to be communicated to the Chief Engineer for information.

(Signed) J. D. SIM,
Secretary to Government.

No. 35. Read the following Proceedings of the Madras Government in the Military Department, dated 28th August 1861, No. 3,002 :—

Approving the estimate for certain additions and improvements to the Arsenal, and for erecting stands in the Grand Magazine at Vizagapatam. } (Vide Military Proceedings, 28th August 1861, Nos. 466-467.)

No. 36. ORDER THEREON, 6th September 1861, No. 1,674.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter of 20th August 1861, No. 4,080.

(Signed) J. D. SIM,
Secretary to Government.

No. 37. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd July 1861, No. 2,200 :—

SIR,

1 Letter from the District Engineer, Presidency, No. 99, dated 18th May 1861.
1 Estimate.
1 Copy of the Proceeding of this Office, No. 868, dated 25th May 1861.

1. I have the honor to forward an estimate amounting to Rupees 1,350 for reforming the road-way over the Elphinstone bridge across the river Adayár.

2. As the road over the bridge was reported by the District Engineer, Presidency, to be very much cut up and in a state dangerous for passengers by wheeled conveyances, that Officer was authorized to carry out the work in anticipation of the sanction of Government.

3. The subject of providing sufficient funds for the road-ways over all the Government bridges within the Presidency is under reference to the District Engineer, and will be laid before Government as soon as it is finally settled, the sum, viz., Rupees 800 allowed in the Budget for this purpose being quite insufficient. In the meantime I trust that the present estimate, Rupees 1,350 which has undergone the usual examination in this Office, may be sanctioned out of the repair funds at the disposal of the District Engineer for the current year, and the proceeding above reported approved of.

No. 38. ORDER THEREON, 7th September 1861, No. 1,675.

1. The Government sanction the estimate for reforming the road-way over the Elphinstone bridge.

2. Referring to paragraph 2 of the Officiating Chief Engineer's letter, the Government object to the practice of undertaking work close to the Presidency without their permission, on the plea that it is of an emergent nature, and they desire that this practice will be discontinued for the future unless there is a positive necessity for the commencement of the work at once.

(Signed) J. D. SIM,
Secretary to Government.

No. 39. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th June 1861, No. 1,704:—

SIR,

1. In a letter dated 7th May 1860, No. 7, submitted to Government, with Colonel Horsley's letter, dated 2nd February 1861, No. 9,512, the District Engineer of Tanjore remarked, whilst referring to the expediency of employing an efficient conservative agency in the District, that "banks are cut through and the "materials of modassels, groynes, &c., are stolen with impunity." Adverting to this allegation, Captain Oakes was called upon to state by whom the irregularities brought to notice were practised; why the present temporary Amíns the subordinates in each Range; and the Ryots or heads of villages should not be made responsible for them; and whether complaints had been lodged before the Magistrate, and if so, with what result. I do myself the honor to place before Government the District Engineer's* reply to these inquiries, as well as subsequent correspondence on the subject.

1 Letter from District Engineer, 18th March 1861, No. 400, with 2 enclosures.
1 Do. to do. 11th May 1861, No. 403.
1 Do. from do. 16th May 1861, No. 23, with 2 enclosures.
1 Do. from Collector, 15th May 1861, No. 99.

* 18th March 1861, No. 400.
To District Engineer, 11th May 1861, No. 403.
From Do. 16th do. „ 23.
From Collector, 15th do. „ 99.

2. In his letter of the 18th March 1861, the District Engineer adverts specifically to a few instances, of the manner in which irregularities of the description of those referred to above, have been dealt with by the Magistrate, in order to show a manifest tendency on the part of that authority to screen offenders, and to slight the Department of Public Works, notwithstanding the most conciliatory demeanour on his own part to maintain a spirit of cordiality between the two Departments.

3. I shall proceed to state briefly the cases enumerated by the District Engineer, placing in juxtaposition, the explanation of the Collector, in refutation of the charges preferred by the District Engineer.

Case I. Materials stolen from the Modassels in the Puttor River in the Parthyur limits.

DISTRICT ENGINEER.

The robbery of 103 out of 111 cocoanut horses, was reported to the Inspector of Police at Kodavaxel. On search being made about 5 or 6 of these horses were found cut up for use as fuel in a brick kiln which was under construction by Ananta Subaroyen, and one in its entire state was discovered in front of one Shasarungadichadar's house. The latter confessed the fact of his having taken the horses, and both parties were charged before the Sub-Magistrate with theft, by the Police Inspector. Whilst the matter was pending inquiry, a Bráhmin of Purthyur gave a written statement, to the effect that one Naranapaiyar stole most of the horses and modassel materials, and that the former had been burnt in a kiln, while the greater portion of the latter were concealed in that individual's house. This statement was forwarded to the Sub-Magistrate, with a request that a Search Warrant might be issued. Naranapaiyar having however come to the knowledge of the steps taken, dispersed the materials tied up in bundles all over the neighbourhood, some of the lost bamboos were actually found, and the circumstance was reported to the Sub-Magistrate in order that the materials might be secured. Some were thrown into the river by men in the employ of Naranapaiyar, and were seen floating down, and were afterwards secured, and produced by the Police before the Sub-Magistrate. The accused party was allowed to be at large, but the informant in the case was confined in the Tannah station, and prevented from even taking his meals at the proper time, which intimidated others from coming forward to give evidence in the matter. These facts were also brought to the notice of the Sub-Magistrate, who

COLLECTOR.

The Collector states that this case, had been carefully inquired into, by the Sub-Magistrate; but the result has been the utter failure of the evidence, to sustain the charge preferred by the Department Public Works. He remarks that there was nothing whatever to show that the few pieces of bamboos and cocoanut trees produced, formed part of the modassels, from which they are alleged to have been removed by the Defendants. The brick kiln, to which the timber is said to have been consigned by Ananta Subaroyen is proved to have been burnt previous to the time when the theft is said to have taken place, and from the rotten and decayed state of the articles produced, it is clear that the same could never have been intended to be applied as fuel for burning bricks. The Sub-Magistrate having personally inspected the sites of the different modassels, found that they were merely the decayed remains of those constructed in the year 1858 and renewed in parts after the high floods of November of that year. The case was decided by Mr. Morris, who, the District Engineer, admits (paragraph 13 of his letter of the 18th March 1861, No. 400) is not unfavorably disposed to his Department.

inspected the place from which the horses were alleged to have been stolen, and took a Mahazarnamah from the people present, to the effect that 14 of the horses said to be missing were still on the spot; but the Sub-Overseer to whom they were pointed out found only the rotten ends and barks of the horses embedded in the bank. The Sub-Overseer in question was nominated by Mr. Sub-Engineer Maitland as prosecutor in the case, he having been in charge of the property. During the inquiry, however, the informant was looked upon as prosecutor, and the Sub-Overseer was turned out of the Kacheri because he had objected to certain irrelevant questions. Mr. Maitland remonstrated against this proceeding, and begged to be informed whether there was any objection to the Sub-Overseer prosecuting, as if there were, he was prepared to prefer an appeal to the Joint Magistrate, through the District Engineer. Mr. Maitland received no answer to this reference, and the informant was still looked upon as the prosecutor, and subjected to much annoyance, though suffering from an acute attack of dropsy. Mr. Maitland remarks that the Sub-Magistrate evidently favored the plea, urged by the accused party, that the modassel had been washed away by freshes, though there are others of 1858 still standing in the same river. Having received information that the case had been thrown out by the Sub-Magistrate, Mr. Maitland applied to know the grounds on which the order was passed, and was informed that the parties had been released for want of sufficient proof. The District Engineer remarks that though the Collector alleges that there was nothing to show that the articles found in the possession of the Defendants, formed part of the modassels, from which they were alleged to have been removed, the Sub-Collector has nevertheless requested the Department Public Works, to assume charge of the material stated to have been stolen, thus showing evidently that the articles must have been proved to be the property of Government, and in fact a portion of the destroyed modassels.

Mr. Morris explains that the materials said to have been stolen, were ordered to be given back, because the party in whose possession they were found did not lay claim to them.

General tendency to screen Mirásidárs when charges for cutting banks are preferred.

The District Engineer reports, that numerous instances of the above description have been brought to the Collector's notice, and in general a tendency to screen the Mirásidárs, has been evinced, whilst to any orders issued to close the cuts, little or no attention is paid. In many instances, pot sluices and even cuts are entered in the old survey accounts, as the means by which certain lands are irrigated. In cases of cuts the Collector was asked to supply pot sluices made of such a length as to afford room for the complete bank above them. This being seldom if ever done, numerous breaches occur. In July 1859 the District Engineer requested the Collector to furnish him, with a list of pot sluices, or cuts allowed in the old survey accounts, with a view to supply masonry sluices where necessary, and he desired also, that all cuts not included in the accounts, may be prohibited. The list has not yet been furnished.

The Collector denies that there has been any such tendency, and alleges that on the contrary, when wilful trespass, has been proved the parties have been duly punished. It has frequently occurred, that what is now termed a cut, and presumed to be newly made, has been in existence for years, and has perhaps afforded the only means of irrigation. The Collector's Records show that in two cases only, has the District Engineer suggested the insertion of pot sluices, and in both these cases orders with detailed instructions, as to how the sluices were to be inserted, were given. The District Engineer having at one time brought to notice that there were more pot sluices than were needed, and that there were still some open cuts, stringent orders were sent, directing adherence to former orders. The examination of the statements furnished by the Táluqs, in connection with the Return of pot sluices, required by the District Engineer, being a work of time, the Return is not yet ready. The Collector however conceives that whilst

the roads and communications of the District are left almost untouched from the want of funds, the construction of so many masonry sluices cannot now be proceeded with.

Case II. Cuts in the banks of the Pittarasanar and Solashadamangar.

The District Engineer forwarded extracts, from a report from Sub-Overseer Sadagopa Mudali relative to 25 cuts made in the banks of the above channels. The Collector in reply, stated that 22 of these cuts were breaches left unclosed by the Department Public Works, that the 3 others had existed for years past and were the only available means of drainage, that the Sub-Overseer was unable to state when and by whom, the cuts were made, and that therefore the Mirásidárs could not be convicted, and punished. The District Engineer then pointed out, that from the smallness, and regularity of the openings there could be no doubt that the banks were cut, and that it was not within the province of his Department to trace delinquents. The Collector in reply, declined to admit that it was the duty of his Department, to discover by whom damages to Public Works are caused, but the District Engineer considers that the Magisterial Department, with the Police Subordinate to it is the Department with whom the duty rests; that the villagers to whom the adjacent lands belong should have been summarily punished, as otherwise, they are encouraged to the commission of similar offences especially as Tahsíldárs are called upon to report on matters brought to notice even by the District Engineer himself, and those Subordinates frequently depute Curnums to investigate them whose reports are endorsed by the Tahsíldár, and are accepted as correct though entirely at variance with the facts of the case, as reported by Officers of high standing in the Department Public Works.

This case was also inquired into by Mr. Morris in his capacity as Joint Magistrate, and the Collector merely endorsed that gentleman's decision.

Under existing Laws and in the absence of clear and distinct evidence in each case this is simply impossible.

The Collector and Tahsíldárs have always felt the imperative necessity for sifting reports, the correctness of which was doubted, and have invariably acted on that principle.

Case III. Trees lying in the Mudicondan and Sitakamangalum Channel not removed as desired.

The District Engineer on the 8th September 1860, requested the Collector, to cause the removal of the above trees, and on the 5th January 1861, he forwarded to the same Officer, an Extract from Mr. Maitland's Inspection Report, whereby it was observed, that the trees had not been removed. The Collector in reply stated, on information received from the Sub-Collector and Tahsíldár, that the trees had been removed in October. As an Officer of Mr. Maitland's standing and respectability had stated that they were still lying in the river on the 24th November the District Engineer concludes that the Sub-Collector and Tahsíldár, had been misinformed as was actually the case; but the Collector gave Mr. Maitland the lie direct, which must tend to lower the members of the Department Public Works in the estimation of the people.

In this case the matter was left entirely in the hands of Mr. Morris and the Tahsíldár of Combaconum, whom the District Engineer considers to be the only members of the Revenue Department who recognize the Department Public Works as it was intended it should be. The Collector reports that the trees fallen in the Mudicondan river were reported by the Sub-Collector to have been removed; but that Mr. Maitland's Inspection Report had reference to trees fallen in the *Rodamurti* river. Mr. Morris was however called upon to state whether he had fully carried out the previous orders, and he replied in the affirmative, adding that the trunk of a tree in the *Mudicondan* (in however the limits of another village) could not be removed, at the time, the first order was sent owing to a fresh which had just then come down. The same cause operated in preventing the uprooting of the Nanal, which however has since been effected. All these circumstances were communicated to the District Engineer.

Case IV. Arasai tree in the Mudicondan.

The District Engineer requested the immediate removal of the above tree, and explained the grounds on which he made the requisition,

The Collector reports that the tree had existed for 30 years, and was an object of worship to the villagers, who, moreover, urge that

but the tree was not removed, as the villagers strengthened the bank with earth, and modasel work, which the Collector considered sufficient. This case is adduced to show that the Collector disregards even the District Engineer's professional opinion.

if the tree were removed from the bank there was nothing to prevent the stream setting on, and sweeping away their Agráram. These points deserved consideration and inquiry, which did not necessarily imply that the propriety of Captain Oakes' professional opinion was called into question.

4. The District Engineer also adduces another instance mentioned to him by the late Mr. Grenfell to show the spirit of opposition, which prevails in the District against the Department Public Works; but it is unnecessary for me to enter into its particulars as the Collector remarks that there is nothing on Record in his Office on the subject.

5. In paragraph 12 of his letter dated 18th March 1861, No. 400, the District Engineer points out that the Collector draws his conclusions respecting the state of Public Works from reports of his native Subordinates, who aware of the relation in which the two Departments stand to each other, represent matters in as unfavorable a point of view as they possibly can. The expression of this sentiment has evoked from the Collector, certain allegations serving to show, that the District Engineer is himself frequently obliged to depend on the information of his Subordinates, who have misled him in some instances. These are enumerated by Mr. Cadell, and I shall refer them for the District Engineer's report.

6. The Government will observe from the Chief Engineer's Proceedings herewith forwarded, dated 11th instant, No. 403, that adverting to the Proceedings of Government, No. 437, dated 15th March last, enjoining on the Collector of Tanjore, the necessity of his using efforts to punish parties brought up before him, and charged with the cutting of channel banks. Colonel Horsley suggested to the District Engineer, the advisability of dropping the subject of his complaints against the Collector, but the District Engineer is unwilling that the matter should be thus lightly dealt with, as independent of the public questions involved therein, there remain, he conceives, yet the "indignities" offered to the Members of the Public Works Department, by the Revenue authorities, which if submitted to, must inevitably deprive the Engineer Department of the power of exercising that moral influence over the Mirásidárs, and others which is so essential to its efficient working. Under those circumstances he begs that his reports on the subject, may be laid before Government for decision, and it is only fair to Captain Oakes to state that his experience with Mr. Cadell the Collector of Tanjore, is that of almost every Officer of the Department Public Works who has been brought into contact with him on public matters since the transfer of 1857, as the Records of the District Engineer's Office will any day clearly prove, and though it is a matter of deep regret, that Government should be troubled with such unbecoming disagreements, and ill-feeling between servants of the same Government, (I myself had too painful experience of the disheartening effect of Mr. Cadell's well known jealousy and ill-feeling to the Department, giving the tone to the conduct of his Subordinates to the consequent serious obstruction of business, yet I cannot take the responsibility of refusing Captain Oakes' earnest request to have the attention of Government drawn to his difficulties.

16th May 1861, No. 23.

7. In a very recent report it became incumbent on Colonel Horsley, to refer especially to the Tanjore District in illustration of the fact that where the present system has not received the efficient support of the Revenue Department the expectations of Government have not been realized. The papers now forwarded only add another link in the chain of proof, that the want of mutual co-operation does unfortunately obstruct the success of the administration of the Public Works Department in the District of Tanjore. It seems difficult to deal with the cases, now reported inasmuch as while in one, the matter of complaint is given in detail, the Collector's explanation not being amplified by a summary of the evidence, is too meagre to admit of any correct judgment being formed. In some cases the complaints are of too general a nature, consisting simply of statements and counter-statements, whilst the cases in point adduced by the District Engineer in proof thereof, are either shown by the Collector to have been incorrectly stated, or proved by an appeal to records to be unestablished.

8. It is unnecessary for me to add any thing further; but the papers now submitted will doubtless receive the consideration of Government when passing orders on the Chief Engineer's letter, No. 896, dated 25th May 1861, above quoted.

No. 40.

ORDER THEREON, 7th September 1861, No. 1,676.

1. The Governor in Council observes that the Chief Engineer, Colonel Horsley, recommended Captain Oakes to drop this complaint. Colonel Birdwood forwarded it at Captain Oakes' urgent request though apparently against his own convictions also, for he writes of it as follows: "It seems difficult to deal with the cases now reported inasmuch as while in one "the matter of complaint is given in detail, the Collector's explanation not being amplified by a "summary of the evidence, is too meagre to admit of any correct judgment being formed. In "some cases the complaints are of too general a nature, consisting simply of statements and "counterstatements, whilst the cases in point adduced by the District Engineer in proof thereof, "are either shown by the Collector to have been incorrectly stated, or proved by an appeal to "records to be unestablished."

2. The Governor in Council regrets much that there should be any want of harmony between the Revenue and Engineer Officers of the Tanjore District. The public service cannot but suffer from even the semblance of disagreement between Heads of Departments; their supposed animosity is speedily adopted by their Subordinates, and thus entire Departments instead of cordially co-operating with each other in advancing the public interests become engaged in mere personal feuds.

3. Differences of opinion will naturally occur between Collectors and Engineers as between other men, but there is no reason why such differences should be viewed by either party as personal affronts, nor why the Government should be looked to, in supercession of the Chief Engineer and Revenue Board, as the sole arbiters of such disputes.

4. The Governor in Council cannot allow the public service to suffer from the existence of any want of co-operation and good feeling between the Collector and District Engineer, nor consent to have his time occupied with their dissensions. If therefore these Officers cannot act in harmony together, he will be compelled to arrange for their employment in different Districts.

5. The Governor in Council observes in the correspondence grave complaints of the conduct of the Sub-Magistrate of Combaconum. These have probably been duly noticed by the Joint Magistrate, if not, they should be looked into and such orders passed as may be necessary.

6. In communicating these orders to the District Engineer, the Chief Engineer will intimate to him that Government rely on his effectually exerting himself to bring about that good feeling which should exist between the two Departments in every branch. The Board of Revenue will convey a similar intimation to the Collector as regards the Revenue and Magisterial Departments.

7. It will be understood that after this warning any further display of ill-feeling will be promptly suppressed by the Government.

(Signed) J. D. SIM,
Secretary to Government.

No. 41. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 27th August 1861, No. 4,344:—

SIR,

1. I have the honor to report for the information of Government that in his letter, No. 1,332, dated 31st January 1861, the District Engineer North Arcot, requested the sanction of this Office to the temporary employment of Terumalayswámi Mudali as a Sub-Overseer of the 2nd Class, 3rd Grade, *vice* Haydon dismissed.

2 letters from the District Engineer North Arcot, with one enclosure.

2. The grounds of the District Engineer's recommendation were, that Terumalayswámi was able to draw and survey very creditably; that during the period (one and half year) he was engaged in tracing and constructing District roads, he afforded satisfaction to the Officer under whom he was employed; that he was previously a Maistry in the Department, and was likely from his knowledge of English and his general intelligence to pass a good examination at the Civil Engineering College.

3. Under the foregoing circumstances, the District Engineer North Arcot was authorized in the Proceedings of this Office, No. 9,768, dated 9th February last, to employ Terumalayswámi as a temporary Sub-Overseer for a period not exceeding six months.

4. Under this order Terumalayswámi entered upon his duties on the 15th February 1861, and as the period for which his temporary employment was authorized expired on the 14th instant, the District Engineer North Arcot, in his letter marginally noted, requests that his services may be continued from the 15th instant, as during the past six months he has afforded satisfaction in the performance of the duties entrusted to him, and has conducted himself with propriety.

No. 479, dated 12th August 1861.

5. Considering that no passed Candidate is available to fill the vacancy caused by the dismissal of Sub-Overseer Haydon, and that Terumalayswámi has proved himself a useful Subordinate during the past six months, I have the honor to recommend that he may be permitted to continue in his present temporary employ so long as the services of a passed Candidate are not procurable.

No. 42. ORDER THEREON, 7th September 1861, No. 1,677.

Under the circumstances stated, the Government permit the continuance of the employment of Terumalayswámi as Sub-Overseer, 2nd Class, 3rd Grade, in the District of North Arcot, for a further period of twelve months.

(Signed) J. D. SIM,
Secretary to Government.

No. 43. Read the following letter from Lieutenant-Colonel W. H HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 27th August 1861, No. 4,359:—

SIR,

With reference to the remark in paragraph 2 of the Government Order, No. 1,485, dated 7th August 1861, that the notice taken by me of Captain Moberly's neglect scarcely amounts to censure, I have the honor to forward herewith copy of a letter addressed to that Officer under my instructions by the then Deputy Chief Engineer Centre Circle, pointing out to Captain Moberly the utter insufficiency of the excuses offered by him for his neglect of duty in regard to the estimate for the buildings at the Artillery Depôt, from which Government will observe that his conduct was not regarded in the lenient light which they appear to think was the case. On the contrary, I thought then, as I do now, that he was very much to blame in the matter, and it would have been no doubt better had I expressed my opinion more strongly in forwarding the supplemental estimate to Government.

No. 9385, dated 29th January 1861.

No. 44. ORDER THEREON, 7th September 1861, No. 1,678.

1. The Chief Engineer submits copy of a letter addressed by his orders to Captain Moberly, the District Engineer of Madras, censuring him severely for neglect of duty, forming the subject of Government Order 7th June last, Military Department, No. 1,970, and Government Order, Public Works Department, 7th ultimo, No. 1,485. The letter is submitted to show that in paragraph 2 of the latter Order, Government were in error in stating that the notice taken by the Chief Engineer of the District Engineer's misconduct "scarcely amounts to censure."

2. The Government in this sentence referred to paragraph 8 to the Chief Engineer's letter, 17th May 1861, which contains the only notice, which so far as the Record showed, had been taken of Captain Moberly's neglect, all that the Chief Engineer there said on the subject was that he was "far from thinking all the reasons adduced by Captain Moberly satisfactory," and this certainly "scarcely amounts to censure." The Government are glad to find that the Chief Engineer did take more suitable notice of Captain Moberly's conduct and regret that the fact was not mentioned in the Chief Engineer's letter to them.

(Signed) J. D. SIM,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 1889
7th September 1861.

No. 45. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th August 1861, No. 4,473 :—

SIR,

1 Letter from the District Engineer Presidency, No. 529, dated 17th July 1861, with two enclosures.
1 Estimate.
1 Plan.

1. I have the honor to forward the accompanying plan and estimate, amounting to Rupees (2,800) two thousand and eight hundred, prepared by the District Engineer Presidency, agreeably to a requisition from the Municipal Commissioners for repairing the groynes and bank of the River Kúam.

2. The estimate provides for repair to the groynes in the vicinity of and west of the Chintadrepettah bridge, also for repairing the north and south banks between Saint Andrews' and Chintadrepettah bridges, and revetting portions with rough stone, especially where the high wing-walls of the several drains are left unprotected. Between the Chintadrepettah and Commander-in-Chief's bridges, the north bank requires stone revetment in several places.

3. As this work should be proceeded with at once, I beg to recommend it for sanction from the general funds at the District Engineer's disposal.

No. 46. ORDER THEREON, 7th September 1861, No. 1,679.

The estimate amounting to Rupees (2,800) two thousand eight hundred, is sanctioned accordingly.

(Signed) J. D. SIM,
Secretary to Government.

No. 47. Read the following Proceedings of the Madras Government in the Ecclesiastical Department, dated 5th September 1861, No. 244 :—

Granting-in-aid a sum of Rupees 3,287-8, for the erection of a Church at Bimlipatam. } (Vide Ecclesiastical Proceedings, 5th September 1861, Nos. 7-8.)

No. 48. ORDER THEREON, 7th September 1861, No. 1,680.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 49. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 27th August 1861, No. 4,332 :—

SIR,

* Dated 17th June 1861.

1 Letter from Lieutenant-Colonel A. Boileau.
3 Bills.
2 Proceedings of the Board of Revenue.

	RS.	A.	P.
† No. 1 Bill	16	8	0
No. 2 Bill..	83	13	2
No. 3 Bill	72	15	10
	173	5	0

1. I have the honor to submit herewith for the orders of Government an original letter* from Lieutenant-Colonel Boileau, as President of the Committee appointed to report upon Mr. Tipping's and "Progress" Steamers, and three bills which accompanied it and which were since revised, amounting† in the aggregate to Rupees 173-5, being the expenses incurred in the trial trips of those Steamers.

2. The first bill is for expenses incurred by Mr. Tipping in working his boat, and in a small sum for Hotel expenses while at Ennore. As the trial was undertaken under orders from Government, I presume it was intended that Mr. Tipping's expenses should be defrayed.

3. The remaining two bills are for labor and materials employed in the trial trips of the Steamer " Progress" on two different occasions.

4. The result of the Committee's proceedings in connection with the first trip has already been laid before Government, and their Orders‡ passed on it. The second trip was undertaken with a view to test the practicability of using the " Progress" as a Tug for the salt boats from the Pans to the Basin, as approved by the Board of Revenue. It was my intention, had this experiment proved successful, to have asked the permission of Government to give the proposition a fair trial. The object of the trip, however, was defeated owing partly to the extreme shallowness of the Canal at the time and partly to the defective state of the engine pumps. The two causes combined prevented a proper supply of water being conveyed to the boiler, while the excessively dirty state of the water occasioned so much priming, that it was found impossible to proceed with the experiment then. It was deemed advisable, therefore, to defer it until there was more water in the Canal.

‡ *Vide* Proceedings, dated 13th May 1861, No. 927.

In their Proceedings, 11th and 27th February 1861, Nos. 751 and 1,083.

5. With reference to Colonel Boileau's remarks, that the charge per ton of coal shown in the bills seems to be very high, I beg to state for the information of Government, that it was supplied from the Public Works Presidency Store Department, and that the rate charged Rupees 40 per ton, is the rate at which the supply was obtained from England, plus the charges at Madras.

6. I have now to request that the Government will be pleased to sanction the disbursement of the amount of the bills in question, viz., Rupees (173-5) one hundred and seventy-three and Annas five, from the sum allowed for contingencies in the Budget.

No. 50. ORDER THEREON, 7th September 1861, No. 1,681.

The bills amounting to Rupees (173-5) one hundred and seventy-three and Annas five, are sanctioned accordingly.

(Signed) J. D. SIM,
Secretary to Government.

No. 51. Read the following Endorsement of the Chief Engineer, dated Chepauk, 29th August 1861, No. 4,420 ;—

Read the following letter from Captain H. L. PRENDERGAST, District Engineer of North Arcot, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Arcot, 12th August 1861, No. 478.

SIR,

With reference to resolution, No. 3,569, of the 5th instant, I regret to state that arrangements were not made for the acquisition of land, to be taken up by the two Railway feeders to the Trittani Station. The measurements of the different lands which the road will occupy, have now been called for, in order that the Collector may adjust the compensation.

Submitted to Government with reference to their Proceedings, No. 1,418, dated 30th July last. The amount of compensation will be reported to Government in due course.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 52. ORDER THEREON, 7th September 1861, No. 1,682.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

Ordered that the following letter be despatched :—

No. 53. From the Honorable W. DENISON, Governor of Fort Saint George, to His Excellency M. D'UBRAYE, Governor of the French Establishments in India, Pondicherry, &c., &c., &c., dated 10th September 1861, No. 1,683.

SIR,

1. I have the honor to acknowledge the receipt of your Excellency's letter of the 6th July last, requesting information regarding the Pier now under construction at Madras.

2. I have the pleasure of enclosing a communication* which contains replies to the questions asked in the second paragraph of your letter, and a series of drawings which will explain the character of the structure. Any further information which may be required I shall be happy to supply, and if your Excellency sees fit to depute any person to inspect the Pier I will, with pleasure, instruct the Officers of my Government to afford him every facility and assistance in his enquiries.

* From Colonel Boileau, Government Superintendent and Controller Pier Works, dated 29th August 1861.

3. I regret the delay which the preparation of the accompanying drawings has occasioned, but trust your Excellency has suffered no inconvenience in consequence.

4. Accept, Sir, the assurance of the high consideration with which,

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No. 54. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th August 1861, No. 4,387 :—

SIR,

1. Agreeably to the orders conveyed in paragraph 3 of the Proceedings of Government of the 22nd July last, No. 1,353, I have the honor to observe that I have carefully considered the subject of a postal communication between Dúmagudiam and Ellore, and am of opinion that the time has arrived when one should be opened. It is the nearest and best route for letters to be conveyed to that part of the country, and now that the river works have been undertaken in earnest, and the order of the Supreme Government has directed the prosecution of the permanent works, the numbers that will be assembled in that locality will be very considerable, and I have little doubt but that the correspondence which will ensue, will fully meet the expenses of the requisite establishment.

Vide Proceedings of Government, No. 1,333, dated 18th July 1861.

2. Until Captain Haig established runners, there were no means of communication, except by Peons belonging to the late Rájah of Baddrachellam, who went periodically to Ellore. I think it of great importance that there should be ready and speedy communication between the Upper Godavery and Dowlaishwaram and Cocanada, whence all the supplies, stores, &c., for the works at the Barriers and for those employed thereon are obtained, and am of opinion that nothing short of a daily post each way will be sufficient.

3. Captain Haig states the present expense to be Rupees 150 for runners alone, to which he would add Rupees 20 for a writer, making in all Rupees 170, but this he thinks might be considerably reduced without any decrease of efficiency. Taking this amount however, and the number of covers which passed in April last at 1,339, they would, if averaging 1 Anna, have paid Rupees 83-11 or nearly half the expenses, so that it would only require the correspondence to increase on the same *ratio* that it has done already, to cover the whole cost. In the months of March and April, for which Captain Haig sends returns, the parties assembled at Dúmagudiam were small, compared with what there will be when the works are in full operation, and I think there can be very little doubt but that the expenses of establishing the communication will be fully met.

	RS.
Runners..	150
Writer..	20
Total.. ..	170

4. I would suggest, as recommended in my first letter,* that the establishment, reduced as far as practicable, say, to Rupees 120 per month, should at first be placed under the orders of Captain Haig, or some resident Officer who might be made ex-officio

* No. 811, dated 23rd May 1861.

Post Master, as being probably better able to ensure the proper working of the line, and that he should be assisted by a Writer on, say, Rupees 15 a month, to be increased to Rupees 20 when the correspondence is such as to cover the entire cost of establishment. Thus the total expenditure for the present would be Rupees 135 a month, of which about Rupees 50 only would be a charge on the works, and that probably not for long.

	RS.
Runners	120
Writer	15
Total.. ..	135

5. A monthly return of all letters received and despatched will be called for, with a view to see how far Captain Haig's expectations have been realized.

No. 55. ORDER THEREON, 10th September 1861, No. 1,684.

The Government grant authority for the Chief Engineer's plan, as explained in paragraph 4 of this letter, being tried for three months. Immediately after the expiration of this period, Colonel Horsley will submit, with his further views on the subject, a return showing the number of letters at each scale of postage rate which may have passed during the time between Dúmagudiam and Ellore, and distinguishing official from private letters and papers. The charge will be met out of the estimate for the Godavery works.

(Signed) J. D. SIM,
Secretary to Government.

No. 56. Read the following letter from Lieutenant-Colonel A. J. M. BOILEAU, Government Superintendent and Controller Madras Pier Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th August 1861 :—

SIR,

1. In my letter dated in June* last, I had the honor to report the arrival of the brig "General Havelock" with piles from the 67th to the 77th rows. The piles on being landed were duly surveyed by me, and were found to be lengths slightly in excess of the register.

* The draft is missing, so that the precise date cannot be stated. (Signed) A. Boileau.

2. On the 5th July the insertion of this batch of piles commenced, the 67th row being screwed on the place of the 65th, and so on, as proposed in my letter to your address dated 5th June last; and the whole of the eleven rows, with their superstructure, were in position on the evening of the 27th July. In the state of the bed of the sea during the month of July the piles were imbedded from 13 to 14¾ feet.

3. On the 5th August the barque "Mazatlan" arrived with the rows from the 78th to the 84th, and the *top lengths* only of the 85th, 86th, 87th; the bottom lengths of which had already arrived on the 4th January last, in the "Prince Frederick William." The "Mazatlan's" cargo was landed on the 26th instant, and the piles were surveyed by me on the 27th instant, and were found to be of the registered lengths.

4. The screwing re-commenced on the 27th instant, the 78th row being put in the place of the 76th, as before, and these seven rows will probably be inserted, and the superstructures of the Pier raised upon them by the 12th September.

5. The 88th to the 96th rows having also arrived in the "Prince Frederick William" there is now nothing to hinder the work going on uninterruptedly to the 94th row, where the 96th will be planted, and it may be expected that the Pier will be completed so far by the middle of October, presuming that no unforeseen hindrances arise.

6. The Pier, including the "inshore extension," will then be 1,020 feet long.

7. The time will then, I think, have arrived for turning the Pier to some account, as contemplated in Clause XIII of the Contract, provided the Contractor's Agent has no objection to offer on the score of the work being impeded thereby.

8. This, and other subjects connected with the details of the Pier, will be laid by me shortly before the Pier Committee, but I have thought the present opportunity of my return to the Presidency and the re-commencement of the work, a favorable one to place Government in possession of the above few facts, in connection with the progress of the Pier.

No. 57. ORDER THEREON, 10th September 1861, No. 1,685.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 58. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,282:—

SIR,

1. With reference to paragraph 3 of Proceedings of Government, No. 2,022, dated 28th September 1860, I have the honor to solicit the sanction of Government for a grant of Rupees 440 for maintaining the bullock track between Yerkád and the foot of the Shevaroy Hills towards Mulliapuram, in the District of Salem, being a total distance of 11 miles, calculated at the rate of Rupees 55 per mensem, for the remaining eight months in the current official year. The sum (Rupees 950) entered in Budget Statement No. 3 for 1861-62, is the maintenance allowance from Mulliapuram to the foot only of the Shevaroy Hills. The sum now asked for may be taken from the balance of the amount entered in Statement No. 3 of Budget 1861-62, for roads not provided with special grants in the District of Salem. This approach to the Shevaroys was reported by the District Engineer in his letter, No. 253, dated 22nd February 1861, completed with the exception of two bridges, estimates for the completion of which were submitted with my letter, No. 4,281, dated 23rd August 1861. Its total cost was Rupees 28,527-3-4.

1 Traffic Return 1, 15,324, 1861.

	RS.
Amount entered in Budget of 1861-62, for roads not provided with special grants	4,917
Deduct amount sanctioned in Proceedings, No. 1,460, dated 3rd August 1861..	1,300
Amount still available..	3,617

2. The accompanying traffic return, which was taken prior to the opening of the Railway, exhibits a daily average of 53 carts and 70 pack bullocks then passing on this line, and since the opening of the Railway, the traffic it is believed, has considerably increased.

3. Permission is also requested for the entry of Rupees 660, for the maintenance of this line, in the Budget of 1862-63 and succeeding years, instead of Rupees 550, as asked for by the District Engineer, for although it is possible that no work can be executed in the months of October and November, it is during these months that the road suffers most from the heavy rains, and provision should be made for its subsequent repair.

No. 59. ORDER THEREON, 10th September 1861, No. 1,686.

The Government sanction from the funds entered in the Budget (No. III), for roads in Salem not provided with special grants, the sum of Rupees (440) four hundred and forty for maintaining 11 miles of the bullock track between Yerkád and the foot of the Shevaroy Hills, being at the rate of 55 Rupees per mensem for the remaining eight months of the current official year; and they further grant sanction for providing in the next and future Budgets 660 Rupees for the maintenance of the above line; but the Chief Engineer will consider and report whether a toll could not be levied on the Ghát to provide a fund for the purpose.

(Signed) J. D. SIM,
Secretary to Government.

No. 60. Read the following letter from J. H. DOPPING, Esq., Civil Engineer, to J. D. SIM, Esq., Secretary to Government, dated Royapettah, 10th April 1861, No. 37:—

SIR,

1. I trust I may be excused for again troubling you upon a subject which, though it has been very often before Government, has not yet, I would respectfully urge, received the consideration which the importance of it to me *as a professional Civil Engineer,* would lead me to hope it may.

2. I enclose a copy of my letter, No. 33 of the 23rd ultimo, to the Chief Engineer, and also his reply, No. 11,620 of the 4th instant, which I beg may be considered as sufficient excuse for my addressing you direct.

3. It is now upwards of two years since I lost my appointment, and I feel that unless my character is now cleared without further loss of time it will take years to recover it, if indeed I can do it at all.

4. I therefore feel that the only course now open to me is to institute immediate legal proceedings against Mr. Peachey, and I now have the honor to request you will obtain for me the permission of His Excellency to my doing so.

5. I have postponed making this application in hopes that I should be restored to my former position, which would in itself go far to remove any damaging impressions, I therefore beg you will be good enough to let me have a reply at as early a date as possible.

P. S.—I have deferred forwarding this letter till now for the reason given in the concluding paragraph; besides I had hoped that Colonel Balfour, one of the Commission who had been engaged in the investigation, would have ere this returned, and I had an idea that he would have used his influence in my favor as he personally told me that he "was surprized at the action "taken by Government on the receipt of the Report of the Commission," even supposing that report must have been true.

This conversation took place some time before Mr. Peachey had been called upon to prove the truth of his assertion.

Saint Thomas' Mount,
August 10th 1861.

(Signed) J. H. DOPPING.

No. 61. ORDER THEREON, 10th September 1861, No. 1,687.

Mr. Dopping is referred to the Order dated 23rd May 1859, paragraph 5, in which the Government have modified their previous unfavorable impression of his character. He is informed that his request to sue Mr. Peachey is inadmissible, and that when he passes in the vernacular his claims for promotion will be duly considered by Government.

(Signed) J. D. SIM,
Secretary to Government.

Read the following letters:—

No. 62. From M. J. SHAW STEWART, Esq., Under Secretary to the Government of Bombay, to J. D. BOURDILLON, Esq., Secretary to the Government of Fort Saint George, dated Bombay Castle, 22nd June 1861, No. 2,857.

SIR,

1. I am directed by the Honorable the Governor in Council to address you, with reference to the letter from the Government of India to your address No. 1,004, dated 22nd ultimo, relative to the transfer from the Presidency of Madras to that of Bombay of a portion of the District of North Canara.

2. The Government of India have, in paragraph 6 of the above-mentioned letter, directed that only so much of the aforesaid Province, including the Port of Sedasheghur, as it may be desirable for the convenience of the people in judicial and fiscal matters, and for commercial purposes, should be transferred to this Government, and have indicated a boundry line drawn somewhere between the parallels of 14° and 14° 30′, according to the configuration of the country, as most likely to meet the purposes in view; and at close of paragraph 2 of their letter the Government of India, referring to a Memorandum by the Collector of Dharwar written in 1836, state that paper to be, in the opinion of His Excellency the Governor General in Council, clear and conclusive as regards the question then in hand, viz., the convenience and better accommodation of the people of the Upper Táluqs of North Canara in respect to the administration of justice and fiscal matters.

3. It is therefore, I am desired to state, evident that to give effect to the views of the Government of India on this subject it will be necessary to transfer to this Presidency the whole of the Táluqs above the Gháts, and it accordingly only remains for consideration what ought to be the southern boundary of that portion below the Gháts which is to be made over for the purpose of giving to Bombay Sedasheghur and its chief lines of access.

4. On this point I am directed to suggest that the River Gairsoppa, which runs between the parallels of latitude indicated by the Government of India, should, from the point at which it leaves the upper country, form the boundary between the two Presidencies in the portion of territory lying below the Gháts, or Alvaguddha, if thought preferable by the Government of Madras, as being, it is believed, the boundary of a Táluq.

5. The Governor in Council, in conclusion, instructs me to state that he is most anxious that the transfer should be completed as early as possible during this monsoon, consistently with the convenience of His Excellency the Governor in Council at Madras, in order that, as soon as the season will permit, he may push on with vigor operations for the opening of the lines of communication from Dharwar and our Southern Cotton Districts to the Port of Sedasheghur.

No. 63. From Colonel H. B. TURNER, Acting Secretary to the Government of Bombay, Public Works Department, to J. D. SIM, Esq., Secretary to the Government of Madras, dated Bombay Castle, 2nd August 1861, No. 3,076.

SIR,

1. The Government of India having in a letter No. 1,004, dated 22nd May 1861, decided that a portion of the Province of North Canara, including the Port of Sedasheghur and the country traversed by the roads from the cotton producing Districts above the Gháts, shall be transferred to this Presidency, I am directed by His Excellency the Governor in Council to intimate that it is deemed of great importance that an early date be fixed for the transfer to the Public Works Department of this Presidency of the charge of all the Public Works in the Districts to be made over and especially of those named in the margin, in order that establishments may be organized and ready on the spot to commence them with vigor, as soon as the season opens. This Government would recommend that the transfer be not in any case deferred longer than the 1st September next.

Statement No. I.		Estimate.	Year.
No. 2. Constructing a new road from Yellapúr to Beitkál Bay, *via* the Kaiga Ghát..	Rs.	95,330	30,000
Additional allotment for road to Sedasheghur, *vide* 15th paragraph of Madras Budget Orders.	,,		30,000
Statement No. II.			
No. 184. Completing road from Hullial to Sedasheghur *via* the Singavaree Ghát	Rs.	126,400	25,000
Repairs to communications in North Canara	,,		84,452
Total for year	,,		1,69,452

2. I am further directed to intimate, that with regard to the provision of funds for the works, His Excellency in Council considers that the best arrangement which can be made will be to place in the Sircy or some other convenient Treasury, to the credit of the Chief Engineer of Public Works in Bombay, the whole or such portions as may not yet have been expended of the sums above mentioned, as well as of the following which have been sanctioned in the Madras Public Works Budget :—

Improvements to Ferry boats, &c., &c., &c., Rupees 5,000.

Establishment, the portion of Rupees 46,000 due to North Canara.

3. Should the views as above expressed be concurred in by the Government of Madras, an Officer from this Presidency will be directed to meet whomsoever it may appoint, to receive charge of the Public Works in question on the date specified.

No. 64. From M. J. SHAW STEWART, Esq., Under Secretary to the Government of Bombay, to J. D. BOURDILLON, Esq., Secretary to the Government of Madras, dated Bombay Castle, 30th August 1861, No. 3,854.

SIR,

As the season for commencing work on the road from Beitkál Bay to Yellapúr is fast approaching, and as no reply has yet been received to the letter* from this Government proposing the 1st of September as the date on which the Public Works of the portion of North Canara to be transferred to this Presidency should be made over to the Officers nominated by the Bombay Government, His Excellency the Governor in Council, I am desired to state, has directed Captain Baker, Executive Engineer Southern Concan, to proceed with all his establishment to Sedasheghur in order that he may be on the spot ready to take charge directly the arrangement with the Madras Government is completed, and which, it is believed, is delayed only with respect to settling the precise boundary.

* No. 3,076, dated the 2nd August 1861, to the Secretary to the Government of Madras (Public Works Department).

Ordered that the following letter be despatched.

No. 65. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Secretary to the Government of Bombay, dated 10th September 1861, No. 1,688.

SIR,

1. I am directed by the Honorable the Governor in Council to acknowledge the three letters noted in the margin, and to suggest that Captain Baker with his establishment should not at present be sent to Sedasheghur.

Dated 22nd June 1861, No. 2,857.
,, 2nd Aug. ,, ,, 3,076.
,, 30th ,, ,, ,, 3,854.

2. This Government has not yet received a reply to their letter to the Secretary of State, in which they pointed out the difficulties and inconveniences which must arise from altering the existing state of North Canara; and even if its partial cession to Bombay should be resolved upon, the arrangement of a new frontier will occupy some little time. To send Captain Baker to Sedasheghur now would therefore be premature, and as your letter shows that he is employed in the Southern Concan, no difficulty or delay will occur in ordering him hereafter to proceed to the spot, should occasion arise for this measure.

No. 66. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,281:—

SIR,

1. With the accompanying letters* the District Engineer Salem, requests sanction for Rupees 3,130 for completing two bridges on the Railway feeders between Yerkád and Mullapúram in that District.

* No. 145, dated 25th October 1860.

2. The original estimate, Rupees 24,600,† for this road, and in which provision to the amount of Rupees 2,944 for the two bridges in question was made, *vide* paragraph 1 of his letter, 22nd February 1861, No. 253, was framed so far back as 1855; the work was commenced in May 1856, but stopped under orders from Government in the following July; re-commenced in January 1857, and again summarily stopped in July of the same year consequent on the restrictive orders which directed all expenditure to be reduced "to a cypher." It was taken in hand the third time in August 1858, and stopped for want of funds in September 1859, the expenditure having exceeded the sanctioned amount by Rupees 3,927-3-4.

† Sanctioned 30th October 1855.
5 Letters from the District Engineer of Salem, Nos. 145, 209, 253, 19 and 46, dated 25th October 1860, 9th January, 22nd February, 20th May and 29th June 1861.
3 Plans, 2, 6, 11-15,324-61.
1 Report, 9-15,324-61.
1 Do. 5 do.
1 Abstract estimate, 4-15,324-61.
1 Do. 8 do.
1 Memorandum showing amount expended and 10-15,324-61.

3. The bills for the total expenditure, amounting to Rupees 28,527-3-4, in which were included Rupees 2,009-12-8 spent upon the above two bridges, were sanctioned by Government, No. 2,436, 24th November 1860; but this Office was misled in considering the work as completed by a remark of the District Engineer, who has since stated‡ that his remark applied not to the whole road but simply to a portion of it, viz., that through the gorge of the Vypandy river, on which he had applied for permission to expend the balance Rupees 5,000, remaining from the estimate in August 1858, and for which permission was granted in Extract Minutes of Consultation, No. 1,596, dated 11th August 1858. It was clearly Captain Gahagan's duty, when submitting the last bill for this work, to have explained that the two bridges in question which were provided for, though as it now appears insufficiently, in the original estimate of Rupees 24,600 were not completed.

‡ Paragraph 3 of No. 253, dated 22nd February 1861.

4. It is true that the District Engineer had, when previously§ submitting a revised estimate for Rupees 85,600,|| which the Government declined to sanction, brought to notice that these two bridges were still incomplete, but this report was overlooked at the time that the bill above alluded to was forwarded.

§ *Vide* Proceedings No. 2,022, dated 28th September 1860.
|| (Corrected to Rupees 86,000.)

5. Much inconvenience is represented to be experienced for want of the completion of these works, and, therefore, I would beg to solicit that the requisite amount, Rupees 3,130, be provided from the reserve fund for these works, the estimates for which have been examined and corrected in this Office. The District Engineer having been referred to, to know whether he was persuaded of the sufficiency of the rates and amount allowed therein for the completion of the two bridges, states, that he has again examined the estimates and believes them to be sufficient.

No. 67. ORDER THEREON, 11th September 1861, No. 1,689.

1. As the reserve fund cannot bear the charge, the Chief Engineer must suggest another arrangement.

2. Colonel Horsley will also state whether these bridges are on the new line of Ghát from Yerkád.

(Signed) J. D. SIM,
Secretary to Government.

No. 68. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,269:—

SIR,

1. Pending the submission of the statement of the additional conservancy establishments required in the Godavery and Kistna Deltas I promised in my letter of the 16th May 1860, I have the honor to request that the accompanying two statements, showing the extra establishments required in the Godavary District may, for the present year, be maintained from the general funds at the District Engineer's disposal, as was directed in Proceedings of Government, No. 2,379, dated 19th November 1860, for similar establishments in 1859-60. In the statements are included establishments for six locks constructed, but for which no establishments have yet been sanctioned. The total amount now asked for is Rupees 8,064 of which Rupees 1,704 are for the locks in question, and the remainder for purposes connected with the distribution of the water and custody of river and canal embankments.

	RS.
A. Statement	6,486
B. Do.	1,578
	8,064

2. These establishments are all absolutely required and their necessity acquiesced in by the Collector.

3. The delay which has occurred in submitting the statements above alluded to, has arisen from the necessity of correspondence with the Collectors of the Godavery and Kistna for their opinion as to the establishment necessary to supervise the distribution of the water. The requisite information has now been received, and will be submitted for the consideration of Government at an early date, when all particulars regarding the difference in the number assigned to each lock, and the rates of pay to Superintendents and Lascars will be fully entered into.

No. 69. ORDER THEREON, 11th September 1861, No. 1,690.

Pending the orders of Government on the report promised in paragraph 3, the submission of which should be expedited, sanction is granted for the conservancy establishment in the Godavery District being, for the current year, maintained out of the general funds at the disposal of the District Engineer, at a charge not exceeding Rupees (8,064) eight thousand and sixty-four.

(Signed) J. D. SIM,
Secretary to Government.

No. 70. Read the following Endorsement of the Chief Engineer, dated Chepauk, 29th August 1861, No. 4,446 :—

Read the following letter from Major SHAW STEWART, Acting District Engineer Vizagapatam, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Waltair, 9th July 1861, No. 339.

SIR,

1. In reply to your communication, dated the 19th January last, No. 9,012, forwarding the Order of Government of the 11th idem, No. 76, I have the honor to inform you that during a late visit to Vizianagram I had a thorough examination made of the accounts prepared during Mr. Carter's employment. I was quite unable to find any proof of their having been fraudulently prepared or altered. The accounts which I found in the Range Office tallied exactly with the Station books and other vouchers sent to the District Office at the time. It seems to have been by a fortunate chance that Captain Blagrave fell in with a bundle of private accounts kept by the Gumáshta, which differed entirely from those kept as Office Records, and which in that instance were clear proof of fraud.

Submitted for the information of Government, with reference to their Proceedings No. 76, dated 11th January 1861, and 7th November 1860, No. 2,291.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 71. ORDER THEREON, 11th September 1861, No. 1,691.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 11*th September* 1861.

No. 72. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd August 1861, No. 4,230 :—

SIR,

* No. 2,358, 13th November 1860.
,, 1,314, 16th July 1861.

† No. 51, 20th October 1860.

5 Letters with one enclosure from District Engineer Madura, Nos. 1,014, 1,295, 219, 263 and 468, dated 18th December 1860, 14th March, 13th and 22nd June, and 25th July 1861.
1 Letter to District Engineer, No. 12,532, dated 29th April 1861.
1 Abstract Estimate.
1 Do.
1 Sketch Map, prepared in this Office.
‡ No. 986, dated 28th November 1860.

1. With reference to the Orders of Government marginally noted,* I have the honor to forward herewith the accompanying letters connected with the condition of the roads referred to in Captain Johnston's report.†

2. With reference to the road from Trichinopoly to the Salem frontier, Captain Palmer, Acting District Engineer of Trichinopoly, remarks‡ that the portion of it from the Coleroon bridge to the Upper Anicut, reported on by Captain Johnston to be in very bad order, has never been metalled, and in the wet weather becomes quite muddy, especially at the site of the breaches caused by the heavy floods of November 1858 and July 1859, where the earth has not become entirely consolidated.

3. The District Engineer also adds that in the dry weather there is no obstacle to the ordinary bandy traffic of the District, but that the road urgently requires metalling to bear the extra traffic that will pass over it, consequent on the opening of the Railway to Salem.

§ No. 2,476, 1st December 1860.

4. An estimate, amounting to Rupees 22,300, providing for the metalling of 17 miles of the road in question, and repairing 21 miles of the remainder in places where gravel was required, has received the sanction of Government,§ and provision has been made for the expenditure of Rupees 16,300 on this road during the current official year.

5. The re-construction of the Iyaur bridge has been suspended pending a reference to the District Engineer, as to whether masonry arches would not be preferable and less expensive than the lattice superstructure at first proposed. With this exception there are no bridges or tunnels required for the road in the Trichinopoly District.

|| No. 219, 13th June 1861.

6. As regards the road from Dindigul to Madura, referred to in paragraphs 14 to 17 of Captain Johnston's report above quoted, it will be seen from the District Engineer's letter|| that out of a sum of Rupees 14,510 sanctioned on the 25th January 1856, Rupees 12,709 had been spent up to the 1st June last.

7. Of the works commenced, a small portion only was fully completed up to the date of the restrictive orders of July 1857, and the consequence was that much of the work that had been executed was rendered useless.

¶ No. 1,295, 14th March 1861.

8. The Acting District Engineer remarks,¶ "that a considerable length of the road between Ammanaickanoor and Dindigul under the Siroomalli Hills has, from being in the same direction as the natural flow of the water, become little more than a water course."

	RS.
From Samianalloor to Ammanaickenoor	6,000
From Dindigul to Ammanaickenoor	1,750
	7,750
Sanctioned estimate	14,510
Expenditure	12,709
Rupees	*1,801

9. The road has from time to time been repaired with the aid of the discretionary allowance; to complete the line, however, and put it in fair order throughout, requires a further outlay of Rupees 7,750 as per margin, which sum the District Engineer states will be required in addition to the balance* of the originally sanctioned estimate.

See accompanying sketch.

10. The principal portion of the outlay now recommended is between Ammanaickanoor and Samianelloor, a distance of 18 miles, where the road crosses the drainage from Siroomalli Hills, and requires raising and gravelling, the natural soil being for the most part clay. The gravel having to be brought from some distance is charged for at 6 Annas per cubic yard.

11. The portion of the road north of Ammanaickanoor, for which Rupees 1,750 are allowed, would require a much larger outlay than is now contemplated to complete with bridges and tunnels, but it is not intended to do more at present than repair the worst portions, and gravel the surface where the soil is bad.

12. The estimates have been examined and corrected in this Office. I have the honor therefore to solicit the early sanction of Government for the amount, being Rupees 7,750, to be defrayed from the reserve fund for the current year.

No. 73. ORDER THEREON, 11th September 1861, No. 1,692.

1. This letter will be communicated to the Financial Railway Department, with reference to paragraph 4 of Proceedings in that Department, dated 8th November 1860, No. 675, and paragraph 3 of Proceedings dated 11th July 1861, No. 522.

2. The two roads, whose state of disrepair in parts was there brought to notice, were the road from Salem to Trichinopoly, and that between Madura and Dindigul. In respect to the former, it is observed from paragraphs 4 and 5 of Colonel Horsley's letter that provision has been already made for putting in order that portion of it lying between the town of Trichinopoly and the southern frontier of the District of Salem; an estimate of Rupees 22,300 having been sanctioned for metalling 17 miles, and repairing 21 miles of the remainder where gravel was required, of which amount 16,300 Rupees is to be laid out during the current official year. The re-construction of the Iyaur bridge, the unfinished state of which was noticed by Colonel Johnston in paragraph 8 of his letter dated 2nd July last, No. 163, is said to be suspended pending a reference to the District Engineer, as to whether a bridge of masonry arches would not be preferable to a lattice structure as at first proposed. The Chief Engineer does not give any information, however, of the state of the continuation of the road from the frontier of Salem District to the Railway station at Salem; and he will be good enough therefore to call on the District Engineer to submit an early report on the condition of that part of the road, and lay the same before the Government.

3. On the road between Madura and Dindigul, 12,709 Rupees has been spent, leaving a balance of 1,801 Rupees yet available for expenditure in this year; but as this sum is wholly insufficient for putting the road in order, especially as a considerable portion between Dindigul and Ammanaickanoor under the Siroomalli Hills has, it is said, "from being in the same "direction as the natural flow of the water, become little more than a water course," an estimate of 7,750 Rupees is submitted, of which 6,000 Rupees is proposed to be laid out on 18 miles between Ammanaickanoor and Samianellore crossing the drainage of the Siroomalli Hills, and the remaining 1,750 Rupees on the repair of the worst portions north of Ammanaickanoor, leaving bridges and tunnels to be constructed hereafter. The Government sanction the above-mentioned estimate of 7,750 Rupees; but as they have pointed out in their Order of the 29th August last, No. 1,644, that it would be inexpedient to draw further on the reserve fund of the year, the Chief Engineer is requested to suggest some other source from which the estimate may be met.

(Signed) J. D. SIM,
Secretary to Government.

No. 74. Read the following Endorsement of the Chief Engineer, dated Chepauk, 3rd September 1861, No. 4,551:—

Read the following letter from Captain E. HEMERY, District Engineer Cuddapah, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer Central Circle, dated Camp Ráyachóti, 14th August 1861, No. 339.

SIR,

1. With reference to paragraph 2 Order of Government No. 1,412, of the 29th July 1861, I have the honor herewith to enclose copy of letter from the Acting Sub-Collector, regarding the salubrity of the Khadri Táluq in which the Mutiálcheroo Tank is situated.

2. As far as my experience goes, I should certainly say that the Khadri Táluq is much less feverish than many others in the District, and particularly than the Rájampet Táluq, in which we always have a large number of works in progress.

3. The inhabitants of Mutiálcheroo and of all the other villages in that valley are apparently very healthy, and are all most anxious to see the tank restored.

4. I remained in the Khadri Táluq this year with Captain Palmer for upwards of three weeks, and during that time we had not a case of fever in our large camp, nor did any of our followers suffer from it afterwards.

5. Under these circumstances, I have the honor to request permission to proceed with the restoration of this fine tank.

Proceedings of the Madras Government, Public Works Department, 1861. *11th September* 1861.

From F. B. MOLONY, Esq., Acting Sub-Collector Cuddapah, to Captain E. HEMERY, District Engineer Cuddapah, dated Madanapalli, 10th August 1861, No. 140.

SIR,

With reference to your letter No. 299 of the 7th instant, I have the honor to inform you that I have no reason whatever to believe that the site of the proposed tank at Mootiálcheroo is in any degree more unhealthy than any other part of the Táluq of Khadri. The Táluq in general has the reputation of being very feverish, and certainly until within the last year there has been a good deal of fever there. In my opinion, however, the unhealthiness of the Táluq has been a great deal exaggerated by a prejudice which has always existed against the Táluq, and certainly for the last year it has been one of the most healthy parts of the District. I cannot see that there is any objection whatever to the project on the score of health, especially as I presume the Wudders, and others who will be engaged on the work, will be drawn from the country round, and will be no more liable to fever at Mutiálcheroo than they would be elsewhere in their own Táluq, to the climate of which they are of course accustomed. The same argument will apply to the Ryots who will cultivate under the tank, and I do not therefore see that the climate will affect any one unless it be the Officer who carries out the work and his Overseers.

(True Copy.)

(Signed) E. HEMERY, Captain,
District Engineer, Cuddapah.

Submitted to Government with reference to their Proceedings, No. 1,412, dated 29th July 1861, and with an intimation that the District Engineer has been directed to proceed with the work under the authority conveyed in the above Order.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 75. ORDER THEREON, 11th September 1861, No. 1,693.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 76. Read the following Endorsement of the Chief Engineer, dated Chepauk, 22nd August 1861, No. 4,181 :—

Read the following letter from Captain R. F. OAKES, District Engineer of Tanjore, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer Southern Circle, dated Tanjore, 11th June 1861, No. 46.

SIR,

1. I have the honor to acknowledge the receipt of your letter dated 4th instant, calling upon me to state whether there is any probability of my entering upon the investigation of the subject of the navigation of the rivers of Tanjore, and to inform you that there is no immediate prospect of my doing so, inasmuch as the rivers are now in fresh and will continue to be so for some months, and I have not yet been able to get a line of levels run down the rivers.

No. 393, dated 25th April 1860.
" 157, " 31st August "
" 201, " 5th October "

2. I would beg to call your attention to the letters noted marginally, and to inform you that I am of opinion that until reservoirs are formed in the hills and a permanent supply of water thus secured for the purposes of navigation, the rivers in the District cannot be rendered navigable.

3. Now that the Railway from Negapatam to Trichinopoly will soon be completed, the formation of a navigable Canal on the adaptation of the rivers for the purposes of navigation between those points, is not at present necessary, and in fact has been prohibited.

Extract from a letter from the Secretary of State for India, dated 16th February 1859.

4. My views with regard to the practicability of rendering the Adapaur and Pamanyaur navigable, are contained in paragraph 4 of letter No. 157, dated 31st August 1860, and though the construction of a few locks would facilitate the navigation of those streams during the monsoon for a few miles above the points to which they are now navigable, the supply would even at that period be precarious, unless reservoirs were formed to keep up a constant supply; for these portions of the rivers are most distant from the source of supply and except during high freshes there is comparatively little water discharged, for the dams which now exist retain only a sufficient supply for the lands dependent upon them.

5. During the past season the boundaries of the new Táluqs were surveyed, and this occupied the time and attention of the Executive Officers and Subordinates whose services could be spared from executive duties, so that I have not been able to have a line of levels run up the Pamanyaur and Adapaur.

1. Submitted for the information of Government, with reference to their Orders Nos. 1,797, 197, 1,116, 158, and 1,278, dated 2nd October 1856, 27th January and 10th June 1857, and 18th January and 27th May 1859.

2. Under the circumstances represented by the District Engineer, and referring particularly to the 3rd paragraph of his letter as above, orders are solicited whether the subject of reporting upon the best means of rendering the rivers in Tanjore navigable may not be struck off the "list of unanswered references."

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 77. ORDER THEREON, 11th September 1861, No. 1,694.

Under the circumstances represented, the subject of the best means for rendering the Tanjore rivers navigable may be struck off the "list of unanswered references" for the present; but the District Engineer will be instructed not to lose sight of it altogether. He may pursue the enquiry at his leisure, and bring the subject forward at some future favorable opportunity.

(Signed) J. D. SIM,
Secretary to Government.

No. 78. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th August 1861, No. 4,369 :—

SIR,

1 Letter from District Engineer Kistna, No. 9, dated 13th May 1861.
3 Estimates.
3 Specifications.
1 Plan.
1 Sketch map.
1 Revenue statement.

1. I have the honor to forward one plan, three abstract estimates, each amounting to Rupees 564, and three specifications for the Head Sluices proposed for construction in the Kistna District, to regulate the supply of water to each of the Ratoor and Pundla Tanks, and to the Appecutta supply channel. The water at present is admitted to these tanks by openings cut in the Commamúr channel bank periodically, the closing of which is at all times a matter of difficulty and expense, besides the danger that the tanks incur from the liability of the breaches to enlarge.

2. The accompanying sketch map shows the portion of the Kistna District which is traversed by the Commamúr channel, and on it the sites of the proposed Head Sluices are marked in pencil crosses. The works appear very desirable, and I recommend them for sanction at an estimated aggregate cost of Rupees 1,692 to be paid from the sum allotted for repairs and minor new works in the Kistna District during the current year.

3. The estimates meet with the approval of the Collector, and have been examined in this Office and found to be correct.

4. The following are the Revenue statistics of these tanks :—

Names of tanks.	Average revenue collected.			Average number of acres cultivated.		Average annual expenditure on repairs for the last 5 years.		
	RS.	A.	P.			RS.	A.	P.
Pundla tank...	3,597	13	2	666	22	538	5	10
Appecutta tank...	4,238	5	0	814	27	229	13	6
Ratoor tank ...	4,980	7	4	1,188	14	118	4	1

No. 79. ORDER THEREON, 11th September 1861, No. 1,695.

The estimates amounting in the aggregate to Rupees (1,692) one thousand six hundred and ninety-two, submitted with this letter, are sanctioned for execution out of the fund mentioned at the end of paragraph 2.

(Signed) J. D. SIM,
Secretary to Government.

No. 80. Read the following Proceedings of the Madras Government in the Educational Department, dated 3rd September 1861, No. 2:—

Requesting to communicate to the Chief Engineer letter from the Director of Public Instruction, stating that the Military allowances of the Principal of the Civil Engineering College can be met from the Budget estimates of his Department. (Vide Educational Proceedings, 3rd September 1861, Nos. 3 @ 5.)

No. 81. ORDER THEREON, 11th September 1861, No. 1,696.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 82. Read the following Proceedings of the Madras Government in the Military Department, dated 2nd August 1861, No. 2,738 :—

Passing orders on the letter of the Inspector General of Ordnance and Magazines, forwarding copy of a report from the Superintendent Gun Carriage Manufactory, relative to the supplies of timber. (Vide Military Proceedings, 2nd August 1861, Nos. 20-21.)

No. 83. ORDER THEREON, 11th September 1861, No. 1,697.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 84. Read the following Proceedings of the Board of Revenue, dated 10th August 1861, No. 4,326 :—

Read again letter from the Collector of Nellore, dated 3rd June 1861, No. 113.

(In Cons. 7th June 1861, No. 3,483.)

Read also the following letter from the Chief Engineer, D. P. W., dated 26th July 1861, No. 3,159 :—

SIR,

1. With reference to your Proceedings of 5th July 1861, No. 3,516, I have the honor to observe that I consider the toll proposed by the Collector of Nellore to be raised at the Penár Anicut may be fairly levied, as the passage by it affords a positive convenience to the public.

2. I agree also with your Board in thinking it preferable not to let the toll out at first, and I should feel disposed to allow *all* foot passengers whether carrying a load or not to pass free, levying it only on carriages, carts and cattle.

In. Cons. 26th October 1860, No. 5,461.

1. Resolved that the above letters with copy of the Board's Proceedings, under date July 5th 1861, No. 3,516, be submitted for the consideration of Government, with reference to their Order under date October 25th 1860, No. 2,196.

2. The Board concur with the Chief Engineer in considering that it will be unadvisable, at any rate for the present, to levy a toll upon mere foot passengers, and the table of rates proposed by them does not provide for it.

(A true Copy and Extract.)

(Signed) R. A. DALYELL,
Sub-Secretary.

No. 85. ORDER THEREON, 11th September 1861, No. 1,698.

1. The Government approve of the proposal for the levy of a toll on the road-way to be formed over the Anicut across the Penár river at Nellore.

2. The rates will have to be graduated after some little experience, by the cost of forming the road-way and the charges of establishment, &c.

3. An estimate for the formation of the road will be submitted by the Chief Engineer in due course.

4. The Government doubt, from paragraph 2 of the Board's Proceedings, whether they have not overlooked the fact that passengers *not* carrying loads are exempt under the Toll Act No. VIII of 1851. The Board also propose in their Proceedings dated 5th July last, No. 3,516, exemptions opposed to Section IV of the Act. The Government see no reason for these exemptions; the road-way is being specially constructed for the use of the public, and those who do not choose to take advantage of it are in no worse position than formerly. The terms of the Act should be closely followed.

5. The system of renting the tolls appears to be preferable as it disconnects the Government with the levy of tolls, and will therefore be adopted after the first few months.

(Signed) J. D. SIM,
Secretary to Government.

No. 86. Read the following Proceedings of the Madras Government in the Public Department, dated 6th September 1861, No. 1,288:—

Requesting the Chief Engineer to state whether any material loss or inconvenience is likely to result from the suspension of works at the General Hospital. } (Vide Public Proceedings, 6th September 1861, Nos. 26-27.)

No. 87. ORDER, THEREON, 11th September 1861, No. 1,699.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 88. Read the following Proceedings of the Madras Government in the Public Department, dated 7th September 1861, No. 1,289:—

Communicating Order of the Government of India and certain correspondence, relating to the inutility of transmitting Telegraphic messages for payments of money. } (Vide Public Proceedings, 7th September 1861, Nos. 28-29.)

No. 89. ORDER THEREON, 11th September 1861, No. 1,700.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 90. Read the following Proceedings of the Madras Government in the Military Department, dated 28th August 1861, No. 3,009:—

Approving of certain alterations in the plans for Store and Guard Rooms, to the European Hospital at Bellary. } (Vide Military Proceedings, 28th August 1861, Nos. 472-473.)

No. 91. ORDER THEREON, 11th September 1861, No. 1,701.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter dated 16th August last, No. 3,989.

(Signed) J. D. SIM,
Secretary to Government.

No. 92. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer in charge of the Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th July 1861, No. 2,802 :—

SIR,

I have the honor to forward herewith a List of the Orders of Government of more than three months' standing, remaining unanswered in the Central Office of Public Works on the 31st March 1861.

No. 93. ORDER THEREON, 12th September 1861, No. 1,702.

1. With this letter the Chief Engineer submits the List of unanswered references for the first half of 1861. Colonel Horsley will be requested to dispense with the letter for the future and submit the list alone.

2. The following papers which have not been replied to, have been omitted from the List without explanation :—

No. 2,414, 22nd November 1860. ,, 628, 27th March 1861.	To furnish a report on the boiler of the steam-boat "Progress."
No. 2,358, 13th November 1860.	To report on the bad state of certain roads in Madura.

13th October 1858, No. 2,152.
24th January 1859, ,, 222.
16th April 1860, ,, 775.
11th June ,, R. ,, 969.
20th August ,, R. ,, 1,396.

3. The Orders noted in the margin may be omitted from future Lists for the reasons assigned by the Chief Engineer.

31st May 1858, No. 1,025.
17th July ,, ,, 1,389.
30th April 1860, ,, 893.

4. There are other Orders in regard to which the Chief Engineer requests the same permission. Some of them have emanated from the Military Department, and orders for their omission or retention will be issued from that Department. The dates of these Orders are given in the margin, and an extract from the Chief Engineer's List as far as it relates to them will be furnished to that Department.

5. The remaining two Orders which Colonel Horsley proposes to omit must be retained for the following reasons :—

8th December 1858, No. 2,663, paragraph 6.

This Order required a report on the bridges on the Arbyle road and on the Sircy and Siddapur road, for transmission to the Home Government. The Chief Engineer states that it has not been complied with, as the District Engineer considered it unnecessary to submit the report, the Government not having in their Order dated 4th July 1860, No. 1,425, regarding the Sankadagundi bridge in North Canara expressed any further wish to have the same. The reason assigned for the omission is altogether insufficient; the Chief Engineer will call for and submit the report as early as possible with full explanation for the great delay.

8th September 1859, No. 2,153.

This Order required that the result of the arrangements made with the Commissary General, for the adjustment of the amount paid for the purchase of a steamer for the conveyance of Military Stores on the Godavery, may be reported to Government. The Chief Engineer requests permission to omit this Order, simply referring Government to their Proceedings, dated 21st June 1861, No. 1,148. The Order of 21st June does not in any way supersede the necessity of that requisition. The Chief Engineer will therefore answer the former Order without further delay.

19th November 1857, No. 2,128.
7th July 1859, ,, 901.
13th August ,, ,, 1,949.

6. The Orders specified in the margin relate to the improvement of the approaches to the Salt pans in the Northern Districts. The Government specially called for estimates and other information about these communications, on the ground that their bad condition affects the Salt revenue; but in the remark's column of the List it is stated that they will be submitted at a more favorable opportunity or when the state of the finances may admit of the works being undertaken. The Government view this disregard of their Orders with displeasure. The Chief Engineer will answer the Orders without further delay and submit the estimates called for.

7. The Chief Engineer is requested to give his early attention to the following Orders :—

6th November 1860, No. 2,280.	To submit Mr. Fraser's explanation on certain points connected with Mr. Bake's accounts.
22nd November 1860, No. 2,414.	To furnish a report on the boiler of the steam-boat "Progress."

8. The Government observe that the Chief Engineer's List of unanswered references has, from the accumulation of several Orders which could have been answered more promptly, become a very lengthy document. Colonel Horsley will use his best endeavours to reduce the arrear as much as possible.

(Signed) J. D. SIM,
Secretary to Government.

No. 94. Read the following letter from Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 15th July 1861, No. 14 :—

SIR,

1. I have the honor to forward, for the sanction of Government, the Account Current of *cash* receipts and disbursements finally received from the Agent, for the quarter ending 31st March 1861, together with its several appendices.

2. The Account Current for stores from the beginning up to 30th June 1860, has just been received and is now under audit in my Office, and another up to 30th December 1860, the Agent states, will be forwarded in a few days.

3. The expenditure by cash and adjustment during the quarter is Rupees 24,216-6-10 and 1,080 respectively, amounting in aggregate to Rupees 25,296-6-10, which is debited to the several heads as follows :—

	Cash.			Adjustment.		
	RS.	A.	P.	RS.	A.	P.
Agency...	8,496	8	4	580	0	0
Engineering	2,454	5	9	0	0	0
Medical...	490	2	0	0	0	0
Stores...	8,075	11	2	0	0	0
Store charges...	3,236	0	3	0	0	0
Charges on stores received from England...	1,463	11	4	500	0	0
Total......	24,216	6	10	1,080	0	0

4. The particulars of the items composing the expenditure under each head have been duly checked in my Office, and explanation obtained from the Agent for all doubtful entries.

5. The points requiring notice are as follows :—

I. The Government recognized the appointment of Mr. Agnew as Agent on the 15th, and on the 21st October 1859 he reported to Government his assumption of office. He has however drawn his salary from the 30th June 1859. On applying to him for the authority under which it is so drawn, instead of from the date on which he has entered upon his duties as Agent, he states that his salary commenced with that of the Board's Consulting Engineer, whose appointment is sanctioned by the Secretary of State to have effect from the 1st June 1860, as apparent from the enclosed copy of a resolution from the Board. That document, however, only definitely states the date of the Consulting Engineer's salary and not that of the Agent.

	RS.
Printing 3,000 copies of Receipts and Issues and Remains, 4 pages............	300
Printing 480 sheets of Store Ledger............	200

II. The payments made on account of printing charges are very high, and more especially in the case of the items marginally noted. On reference to the Agent he states that the charges in question have been objected to by the Chief Accountant, and some items have been reduced by him, and in consequence of the continued exorbitant charges made by Messrs. Graves & Co., he discontinued employing them any longer.

III. A bill amounting to Rupees 1,134-2-4 is charged in the accounts, on account of the travelling expenses of the Agent on tour to Kurnool between July and November 1860, in support of which the Agent submits the enclosed copy of the Board's letter ordering him to proceed to Kurnool on special duty. These charges, as of necessity incurred, may be passed.

No. 95. ORDER THEREON, 12th September 1861, No. 1,703.

1. With this letter the Consulting Engineer for the Madras Irrigation and Canal Company submits the accounts of the Company for the first quarter of 1861.

2. The actual expenditure during the quarter ending 31st March 1861 amounted to Rupees 25,296-6-10, of which the sum of Rupees 1,080 constituted adjustment from advances previously made. The advances paid during the quarter under notice amounted to Rupees 46,108.

3. The Consulting Engineer has properly taken exception to the disbursement of the salary of the Agent for several months previous to the date on which he entered upon his duties. The explanation afforded by the Agent, viz., that his salary commenced with that of the Board's Consulting Engineer, whose appointment was sanctioned by the Secretary of State to have effect from 1st June 1860, is not sufficient. The subject will be brought to the notice of the Secretary of State, but before doing so the Government desire to know the date from which Mr. Agnew actually drew the salary; according to the accounts now before Government and Captain Rundall's letter it was 1st July 1859, but from Mr. Agnew's explanation alluded to, 1st June 1859 (not 1st June 1860, as incorrectly stated in Captain Rundall's letter) appears to have been the correct date. They also wish that the Consulting Engineer will ascertain and report under what circumstances the Agent has not drawn the salary from July 1859 to 14th October 1859 till January 1861, and in what month's accounts the disbursement of his salary from 15th October 1859 appeared.

4. With reference to the high charges paid for printing, the Government must remark that no press should have been employed for any work till the rates have been previously agreed upon by both parties.

5. The Government cannot but remark that the list of the travelling expenses of the Agent shows that little regard was had to economy. In July a bullock coach was purchased for 600 Rupees, and in November following it was sold for Rupees 194-4. For such temporary use a much less expensive conveyance could have been procured.

6. The Government observe that the salary of the Chief Accountant and Store-keeper from 20th November 1860 to January 1861 is entered in the Store Accounts, while that for February 1861 appears under Agency. A uniform plan should be followed.

	RS.
"Amount paid on securities employés".........	190
"Mr. Fitzzibbon his deposit against loss by exchange"..	100

7. The Government do not understand the two items in the Account Current entered in the margin. Explanation is requested.

8. With these remarks His Excellency the Governor in Council will forward the accounts to the Secretary of State as soon as the information called for in paragraphs 3 and 7 is submitted.

9. The Government notice that the Engineering Accounts of the Company are still in arrear. The advance paid up to March last amounted to Rupees 3,79,381-2-2, and the state of the accounts connected with the expenditure of this sum are, as far as the Government are aware, not at all satisfactory. The Chief Accountant, in his letter* of 6th March 1861, stated that the advances paid up to December 1860, amounting to Rupees 3,33,272, are in a fair way of being adjusted by the end of that month; but the papers before Government do not show that any progress has been made. The Consulting Engineer will call upon the Agent for an explanation on the subject.

* *Vide* Captain Rundall's letter, dated 4th April 1861, No. 152.

(Signed) J. D. SIM,
Secretary to Government.

No. 96. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 5th September 1861, No. 4,622 :—

SIR,

1. With reference to your Official Memorandum No. 330, dated 2nd September 1861, I have the honor to inform you that the Proceedings of Government, No. 1,384, dated 25th July 1861, were forwarded by me to the District Engineer of Madras, and also to the Deputy Chief Engineer Central Circle, who was on the point of starting for a tour in the North Arcot and Madras Districts.

2. The latter Officer was desired to enquire personally from the District Engineer and report—

(1.) What measures he proposes for carrying out the work in connection with the Pálár project?

(2.) To what extent it may be expected work may be carried out in the current official year?

(3.) Whether the funds at his disposal are sufficient or otherwise?

3. Lieutenant-Colonel Boileau informs me, that replies to these questions will be embodied in the report of his tour which he hopes to furnish me with in the course of a few days.

No. 97. ORDER THEREON, 12th September 1861, No. 1,704.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 98. Read the following Endorsement of the Chief Engineer, dated Chepauk, 3rd September 1861, No. 4,553 :—

Read the following letter from Captain J. F. STODDARD, Acting District Engineer, Godavery District, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Cirle, dated Dowlaishwaram, 2nd August 1861, No. 504.

SIR,

1. I have the honor to forward certain Workshop bills, for repairs, &c., done to the steamers "Queen" and "Little Nell," prior to the visit of His Excellency the Governor of Madras to this District, but which amount I am of opinion should be borne by the State and not by His Excellency.

2. A bill amounting to Rupees 396-13-3, on account of expenses *boná fide* incurred on account of His Excellency, was forwarded to the Military Secretary by me on the 25th ultimo at his request.

3. While on this subject, I have the honor to request your opinion as to the advisability of my sending in an estimate for keeping in repair, during the year, the steamers employed on the lower Godavery, as they are often brought to the Workshop requiring some repair or other, and it would be inconvenient to send estimates in on every occasion.

---

1. Submitted to Government with a request that the bills for Rupees 399-3-2 and 181-7-1 respectively, may be sanctioned.

2. The matter referred to in paragraph 3 of the District Engineer's letter, which will be dealt with in this Office, should have formed the subject of a separate communication as ordered in paragraph 5, Section 3, Chapter XV, of the new Code. This will be pointed out to the District Engineer.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 99. ORDER THEREON, 12th September 1861, No. 1,705.

The two bills referred to in paragraph 1 of the Chief Engineer's endorsement are sanctioned.

(Signed) J. D. SIM,
Secretary to Government.

No. 100. Read the following letter from E. B. THOMAS, Esq., Magistrate of Coimbatore, to J. D. SIM, Esq., Secretary to Government, dated Ootacamund, 24th August 1861, No. 45 :—

SIR,

Under the circumstances noticed by the Joint Magistrate, Colonel* Brown, I would request Government sanction, and give orders for the Executive Hill Engineer repairing the Flag Staff alluded to, it is looked to by the community here, and would be much missed if taken down.

* *Vide* accompanying copy of his letter dated 23rd instant, No. 73.

From Colonel J. R. BROWN, Joint Magistrate of Ootacamund, to E. B. THOMAS, Esq., Magistrate of Coimbatore, dated Ootacamund, 23rd August 1861, No. 73.

SIR,

1. I beg to bring to your notice that the Flag Staff requires immediate attention to secure the same from falling down, which should it happen to do on the side of the public Office much damage would accrue to the building.

2. The ropes which support it are more or less broken, and must before long give away altogether.

3. To remove the Flag Staff would be a source of inconvenience in more ways than one, for every thing connected with the Post Office is signalized from it, as well as all notices given of the arrival of the pay of Officers residing on the Hills, as well as denoting the arrival of the public news by steamers, from England and China. May I therefore request the favor of your bringing the matter to the notice of Government.

(True Copy.)

(Signed) E. B. THOMAS,
Magistrate.

No. 101. ORDER THEREON, 12th September 1861, No. 1,706.

Communicated to the Chief Engineer, in view to his issuing instructions to have the Flag Staff at Ootacamund attended to at once.

(Signed) J. D. SIM,
Secretary to Government.

No. 102. Read the following Proceedings of the Madras Government in the Judicial Department, dated 7th September 1861, No. 1,128 :—

Requiring the Chief Engineer to prepare, in communication with Mr. Rohde, a plan and estimate for a Jail at Chetterpore, sufficient for the health, secure custody, and classification of the prisoners, but not adapted to the separate system. } (Vide Judicial Proceedings, 7th September 1861, Nos. 50 @ 52.)

No. 103. ORDER THEREON, 12th September 1861, No. 1,707.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 104. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd September 1861, No. 4,524 :—

SIR,

1 Letter from District Engineer, No. 262, dated 22nd June 1861.
1 Abstract list of incomplete works.
1 Sketch map prepared in this Office.

* Tondi to Dindigul.
Do. to Madura.
Meylur to the Tanjore boundary.

I have the honor to forward a letter, marginally noted, from the District Engineer of Madura, applying for a sum of Rupees 11,259, for completing bridges and tunnels on the roads named in the margin,* together with a sketch map and an abstract list of estimates for the same.

2. The estimates for the repair of these roads prepared in the beginning of the year 1859, carefully revised by the District Engineer and fully approved of by the Collector, amounted in the aggregate to Rupees 55,430, of which Rupees 37,027 provided for earthwork and gravel, and Rupees 18,403 for bridges and tunnels.

* No. 638, 18th March 1859.
† Rupees 25,000.

3. Owing to a misapprehension of the Government sanction* of an emergent allotment† for repairing the damages done during the heavy rains of the previous year, the masonry works on these three lines were undertaken by the District Engineer from this source.

‡ No. 6,046, 12th October 1859.

4. It was restricted, however, to the official year of 1858-59, but the masonry works on the three lines were carried out on until October 1859, when it was pointed‡ out to the District Engineer that the unexpended balance of the grant of Rupees 25,000 remaining on the 30th April 1859, was not available in the succeeding official year, and the works under notice were thus brought to a stand still.

5. The expenditure thus incurred was Rupees 12,360 on earthwork, and Rupees 7,144 on masonry works, making a total outlay of Rupees 19,504.

6. Captain Ryves now requests authority to spend Rupees 11,259 in completing the masonry works, and states that as the estimates for the earth and gravel work were prepared more than two years ago, fresh estimates are being prepared for submission.

7. Of the sum of Rupees 7,144 spent on bridges and tunnels, work valued at Rupees 4,376 has been executed, and the balance, Rupees 2,768, is now in the Contractors' hands, which Captain Ryves' reports, if authority be granted to complete the works, they will in all probability work out, but if further delay be allowed, a large portion of the outstanding balance will be lost to Government. "The importance of these roads, their wretched state, and the injury to the "people and the salt revenue caused thereby," the District Engineer adds, has been repeatedly urged by Mr. Clarke, Mr. Levinge, and himself for the last five years.

8. The estimates have been examined and corrected in this Office, and under the circumstances mentioned by the District Engineer, and with a view to complete works already partially executed, I beg to recommend that the further expenditure now applied for, viz., Rupees 11,259, may be sanctioned from the reserve fund of the current year.

No. 105. ORDER THEREON, 12th September 1861, No. 1,708.

In the foregoing letter the Chief Engineer applies for a grant of Rupees 11,259, for completing bridges and tunnels on certain roads in the District of Madura, to be met out of the reserve fund. From a list prepared in the Government Office, a copy of which will now be furnished to the Chief Engineer, it is observed that the allotments out of the reserve fund, already proposed by him up to 4th instant, have amounted to Rupees 6,28,975, being 75,212 Rupees in excess of the sum authorized by Government as the reserve fund. The Chief Engineer is requested therefore to point out some other source from which the sum required for these useful works can be drawn.

(Signed) J. D. SIM,
Secretary to Government.

No. 106. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th August 1861, No. 4,464 :—

SIR,

In reply to the enquiry in paragraph 2 of the Proceedings of Government No. 1,580, dated the 20th instant, I have the honor to state that the value of the steamers received from England, like that of all machinery and stores, is brought on the books of the Central Office, under the head "Stores of the Public Works Department," upon the receipt of the Valuation Invoices thereof from the Accountant General. These steamers are included in the periodical Returns furnished from Districts to the Presidency Store Department, and the value of the same is held to the debit of the Districts in the Stock Ledgers of the Store Department, but no entry on this account appears in the District Engineer's Cash Account Current with the Central Office under the head "Stores," as this head is debited, in the first instance, on the receipt of Valuation Invoices as above-mentioned.

No. 107. ORDER THEREON, 12th September 1861, No. 1,709.

* G. O. 3rd August 1861, No. 1,448.

In a recent Order* Government permitted the Chief Engineer to authorize the sale of all stores, including machinery and instruments belonging to the Department of Public Works, which have become worn out and useless from ordinary wear and tear. Colonel Horsley will be informed that it is not their intention that steamers should fall under the operation of that rule. Proposals for the sale of such vessels, when they become unserviceable from any cause whatever, should invariably be submitted for the sanction of Government.

(Signed) J. D. SIM,
Secretary to Government.

No. 108. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th August 1861, No. 4,447 :—

SIR,

4 Letters from District Engineer, Nellore.
Nos. 2,010 and 65, dated 3rd October 1860 and 15th January 1861.

1. I have the honor to report for the information of Government, that the District Engineer Nellore, in his letters noted in the margin, recommended the temporary employment of one C. Venkatasooba Row as a Sub-Overseer of the 2nd Class, 3rd Grade.

2. The grounds of the District Engineer's recommendations were, that Venkatasooba Row had served from 1st April to 31st July 1857, as a Sub-Overseer of the 3rd Class, 1st Grade; that prior to that period he had been employed as a Maistry in the Nellore District; that subsequent to the reduction of the Public Works Establishment ordered in July 1857, he had been doing duty as a Gumáshta under the orders of Captain Ritherdon; and that as he thoroughly understood the construction of masonry works, and was, moreover, able satisfactorily to execute ordinary repairs to works of irrigation and communication, he was likely to prove a useful member of the Department.

3. Under the foregoing circumstances and agreeably to the authority conveyed in the Proceedings of Government, No. 1,352, dated 13th September 1860, the District Engineer Nellore, was authorized to employ Venkatasooba Row as a temporary Sub-Overseer 2nd Class, 3rd Grade, for a period not exceeding six months, *vice* Armooga Mudali promoted.

4. Under the authority thus conveyed, Venkatasooba Row entered upon his duties on the 1st January last, and as the period for which his temporary employment was authorized expired on the 1st ultimo, the District Engineer Nellore, requests* that as he has proved himself a useful Subordinate and has conducted himself well during the past six months, his services may be continued.

* Letters Nos. 1,152 and 1,408, dated 8th July and 16th August 1861.

5. Taking into consideration the past services of Venkatasooba Row, and the favorable account given of him by the District Engineer Nellore, I have the honor to recommend that he may be permitted to continue in his present temporary employment until the services of a passed candidate shall be available for the post.

No. 109. ORDER THEREON, 12th September 1861, No. 1,710.

On the recommendation of the Chief Engineer, the Government permit the continued employment of C. Venkatasooba Row, as a Sub-Overseer 2nd Class, 3rd Grade, in the District of Nellore, for a further period of one year.

(Signed) J. D. SIM,
Secretary to Government.

No. 110. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 5th September 1861, No. 4,625 :—

SIR,

In reply to the Proceedings of Government, No. 1,603, dated 23rd ultimo, I have the honor to state that the Budget for 1861-62 does not contain any provision for the allowance of 20 Rupees per mensem passed to Mr. Doderet in lieu of public quarters; but the necessary provision will be made in the Supplemental Budget under the head "salaries and contingencies," to cover that charge as well as Mr. Doderet's salary, for which also no allowance has been made, intimation of his departure from England not having been received till the 3rd July 1861, No. 1,240.

No. 111. ORDER THEREON, 12th September 1861, No. 1,711.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 112. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th August 1861, No. 4,380 :—

SIR,

1 Original letter dated 2nd August 1861, No. 323.
1 Copy of Covenant.

1. I have the honor to submit for the orders of Government the accompanying letter from Mr. J. H. Dopping, 1st Assistant District Engineer, requesting to be informed whether all the expenses incurred by him in endeavouring to obtain a knowledge of the vernacular will be disbursed to him, and whether in the event of his passing the prescribed colloquial examination the reward formerly offered will be given.

* Proceedings of Government dated 6th December 1860, No. 2,511.

2. As respects the first question, I would observe that so far as I am informed there is no rule under which Munshí allowance can be passed to Mr. Dopping without the special sanction of Government, and as Government* have decided in the case of young Engineer Officers who pass the Departmental examination, that they are not on that account entitled to Munshí allowance, I do not see why Mr. Dopping, or those similarly situated, should be treated differently. With regard to the second question, it seems to me that at this distance of time Mr. Dopping cannot rightly claim any portion of the reward offered in the Proceedings of the Government of India, communicated with Extract Minutes Consultation, No. 900, dated 13th December 1855, for

passing the colloquial examination, as that was limited to 12 months from the date of arrival in India. In the event, however, of Mr. Dopping's attaining either of the higher standards mentioned in the above Order, a lenient view might perhaps be taken of the subject and the reward granted.

3. With reference to the 3rd and 4th paragraphs of Mr. Dopping's letter under notice, I have only to remark, that as according to the orders of the Supreme Government above quoted, paragraph 7, and to those of this Government dated 25th August 1859, No. 2,030, all Officers are required to pass in the vernacular, he cannot consider it an injustice if, in consequence of his failing, as he has done, to attain the prescribed standard, he has been superseded by other Officers who, though his juniors, have complied with the requirements of Government on the subject.

4. I beg to enclose a copy of Mr. Dopping's Covenant, from which it will be observed that it makes no mention of Munshí allowance or to the reimbursement of any of the expenses which may be incurred by him in attaining a knowledge of the vernacular, in fact there is nothing said in the Covenant about the necessity of acquiring a knowledge of Native languages.

No. 113. ORDER THEREON, 12th September 1861, No. 1,712.

1. The Governor in Council does not see the necessity of this reference to Government. The questions raised by Mr. Dopping have been correctly answered by the Chief Engineer, and the Government fail to see on what point there can be any doubt.

2. The Governor in Council regrets to find Mr. Dopping complaining in so unreasonable and querulous a manner, and they trust that this feeling does not extend further and influence his conduct. He seems to forget that he has for a considerable period drawn a much higher salary than his Covenant provides for, and that the rule debarring Covenanted Engineers who have not passed in the vernacular from holding a separate charge has been waived in his case for a very long time. The Governor in Council hopes that Mr. Dopping will exert himself to pass in the vernacular and cease to dwell on disappointments which his disqualification in this respect render inevitable.

(Signed) J. D. SIM,
Secretary to Government.

No. 114. Read the following Proceedings of the Madras Government in the Military Department, dated 22nd August 1861, No. 2,940 :—

Communicating a letter from the Government of India, on the subject of a scheme for the establishment of Workshops in European Regiments. } (Vide Military Proceedings, 22nd August 1861, Nos. 365-366.)

No. 115. ORDER THEREON, 12th September 1861, No. 1,713.

Ordered to be communicated to the Chief Engineer for information.

(Signed) J. D. SIM,
Secretary to Government.

No. 116. Read the following Proceedings of the Madras Government in the Military Department, dated 4th September 1861, No. 3,112 :—

Approving the estimate for repairing the Reservoir at Wellington. } (Vide Military Proceedings, 4th September 1861, Nos. 66A-66B.)

No. 117. ORDER THEREON, 12th September 1861, No. 1,714.

Ordered to be communicated to the Chief Engineer.

(Signed) J. D. SIM,
Secretary to Government.

No. 118. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th September 1861, No. 4,690 :—

SIR,

1. In Clause 17 of the Rules for drawing funds for public works expenditure it is provided that the Cheques shall be printed at the Gazette Press, but I have now the honor to propose for the approval of Government that this work be done at the Lithographic Press attached to this Office, where the Cheques could be impressed on thinner paper, which will be necessary to prevent erasures, and where the style of the work will be such as to present difficulties in the way of attempts to forgery. By this means also it is expected that the Cheque Books will be supplied to the Districts at an earlier date.

Standing Circular No. XXX, dated 22nd July 1861.

2. I have to solicit the early orders of Government on the above proposal.

No. 119. ORDER THEREON, 13th September 1861, No. 1,715.

The Chief Engineer's proposal to prepare the Cheques for use in the Public Works Department in the Lithographic Department of his Office is approved.

(Signed) J. D. SIM,
Secretary to Government.

No. 120. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 31st August 1861, No. 4,487 :—

SIR,

No. 917, 10th May 1861.

1 Letter from District Engineer, 22nd April 1861, No. 626.
1 Do. to District Engineer, 6th May 1861, No. 206.
1 Do. from do. 12th June 1861, No. 97, with one enclosure.
1 Do. from do. 2nd July 1861, No. 141, with two enclosures.
1 Do. from do. 3rd August 1861, No. 196.
1 Plan.

1. With reference to Proceedings Madras Government marginally noted, I have the honor to forward a bill amounting to Rupees 756-12-8 for the work executed in repairing the damage done to the northern pier of the Bhowani bridge at Mettapolliem, in the Coimbatore District, in anticipation of sanction, viz., the removal of a portion of a large tree brought down by a fresh and which had lodged itself in the cut-water of one of the piers and for repairing the damage done thereby.

2. As promised in paragraph 3 of my letter* as per margin, I now forward a letter† from the District Engineer of Coimbatore affording information with reference to the previous expenditure,‡ together with a plan and section showing the portion of the tree as lodged in the pier, and the appearance it presented before the repairs were executed.

* No. 12,544, 29th April 1861.
† No. 196, 3rd August 1861.
‡ Rupees 582-14-8.

3. From the letter it will be observed that in addition to throwing in stones round the injured pier and under the arch, as reported in my letter,§ the following items have also been included in the expenditure of Rupees 582-14-8 :—

§ No. 12,544, 29th April 1861.

	RS.	A.	P.
(1.) The maintenance of an Elephant and the purchase of tackle for removing the tree	19	15	11
(2.) Sawyers' hire for removing 137½ cubic feet of the protruding portions of the tree	15	0	0

These items, after all, amount to a very small sum in comparison with the total expenditure in 1859-60, which was, as stated in my letter as above forwarding the bill, chiefly for depositing rough stones around the injured pier and under the arch to secure the foundations of the bridge. The quantity of rough stone deposited is stated to have been 208 cubic yards.

4. The work executed in 1860-61 consisted of throwing a ring-bund round the injured pier, removing the portion of the tree lodged in the pier; supporting the injured part in the mean time by uprights, as shown in plan, and re-constructing the latter. A considerable portion of the outlay is for setting up a pump and baling, estimated at Rupees 202.

5. I had an opportunity when proceeding to the Neilgherries in May last of personally inspecting the work, which was then completed, and appeared to have been executed in a substantial and workman-like manner, highly creditable to Captain Burn the Executive Officer of the Range, under whose immediate superintendence the repairs had been carried out.

6. I have the honor therefore to solicit the sanction of Government to the bill now submitted amounting to Rupees 756-12-8.

No. 121. ORDER THEREON, 13th September 1861, No. 1,716.

The Government sanction the bill submitted with this letter for repairing the injured pier of the Bhowani bridge, amounting to Rupees 756-12-8. It will be explained whether this outlay is in addition to the Rupees 582-14-8 sanctioned on the same account in their Proceedings of the 10th May last, No. 917; if so, the total cost of repairing the pier injured by the tree brought down by the fresh is (582-14-8+756-12-8)=1,339-11-4, which seems a very large sum for the purpose.

(Signed) J. D. SIM,
Secretary to Government.

No. 122. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq , Secretary to Government, dated Chepauk, 3rd September 1861, No. 4,587:—

SIR,

In reply to the Proceedings of Government No. 1,647, dated 30th ultimo, I have the honor to inform you that the old stables belonging to the late Náwáb of the Carnatic are at present occupied by the Sappers, and when they vacate them, I propose taking possession of them with a view of keeping in them such stores as cannot be accommodated in Abercrombie's Battery, and in the Ferosh Khana at Chepauk, which is now being got ready for the purpose, under an estimate of Rupees 2,000 sanctioned by Government on the 14th June 1861, No. 1,097, as a temporary measure, until permanent Store rooms are erected.

No. 123. ORDER THEREON, 13th September 1861, No. 1,717.

The Governor in Council resolves to defer the consideration of this subject for the present with reference to the Board's letter dated 2nd September 1861, No. 4,757. Meanwhile, stable accommodation may be temporarily afforded in any available part of the old stables or any other vacant building.

(Signed) J. D. SIM,
Secretary to Government.

No. 124. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd September 1861, No. 4,535:—

SIR,

1. With reference to their Proceedings No. 1,523, dated 10th August 1861, I have the honor to report for the information of Government that under the notification of the 2nd March 1860, no Supervisor on the permanent strength of the Department can be promoted to the grade

of Sub-Engineer unless he has served five years in the former position, or has passed the prescribed examination. As Mr. Supervisor Blacker has not fulfilled either of these conditions, he is not eligible for promotion to the temporary vacancy caused by the absence of Mr. Sub-Engineer Arnold on medical certificate.

2. From Colonel Birdwood's letter, No. 1,708, dated 19th June 1861, it will be observed that the services of an additional Upper Subordinate are very much required for the execution of the works in the Kalkadda Táluq, where, owing to the want of executive aid, no expenditure whatever was incurred during the year 1860-61.

3. With a view of supplying Captain Hemery with an additional Assistant Overseer during Mr. Arnold's absence, it was suggested in Colonel Birdwood's letter above quoted, as well as in mine, No. 3,298, dated 30th July 1861, that the undrawn portion of the Sub-Engineer's salary and travelling allowances, which amount to Rupees 215, should be appropriated as follows:—

	RS.	A.	P.
Deputation allowance to the Subordinate Officiating in Mr. Arnold's Range	50	0	0
Salary of additional Assistant Overseer	80	0	0
Travelling allowance of do.	45	0	0
To be carried to the credit of Government	40	0	0
Total	215	0	0

4. In their Proceedings No. 1,239, dated 3rd July 1861, the Government objected to the foregoing arrangements and directed that temporary promotions should be made to fill Mr. Arnold's place. By the adoption of this course, however, I informed Government in my letter as per margin, that the sum available for the salary and travelling allowance of the additional Assistant Overseer required in the Kalkadda Táluq, would be only Rupees 110, or Rupees 15 less than the authorized amount, viz., Rupees 125.*

No. 3,298, dated 30th July 1861.

	RS.
*Salary	80
Travelling allowance	45
	125

5. In their Proceedings No. 1,523, dated 10th August 1861, on the foregoing letter, the Government objected to sanction appointments not in conformance with the rules and practice of the Department, and directed that if there were no Subordinates in Cuddapah qualified for promotion, they should be obtained from the adjoining Districts. With reference to this remark, I would beg to observe, that the only grades (that of Sub-Engineer excepted) to which there were no Subordinates qualified for promotion in the Cuddapah District were those of Supervisor and Assistant Overseer, and in the event of an Assistant Supervisor from one of the adjoining Districts being promoted temporarily to the rank of Supervisor, the amount which would be available from the sum forfeited by Mr. Arnold for the pay and travelling allowance of an Assistant Overseer would be further reduced by Rupees 25, or Rupees 40 less than the authorized amount, viz., Rupees 125.

	RS.
Amount forfeited by Mr. Arnold	215
Extra salary to Subordinates officiating as Sub-Engineer, Supervisor, Assistant Supervisor and Overseer	85
Extra travelling allowance to Subordinates officiating as Sub-Engineer and Assistant Supervisor	45
	130
Balance available for salary and travelling allowance of additional Assistant Overseer	85
	215

6. As regards the temporary promotion of a Sub-Overseer to the rank of Assistant Overseer, I have the honor to state that as under the notification of the 2nd March 1860, none of this class are eligible for that grade until they have

served seven years as Sub-Overseers, the promotion thereto of any of the men employed in the Districts adjacent to Cuddapah would be irregular and not in conformance with the practice of the Department. Moreover, the Districts adjacent to Cuddapah have no more than their own complement of Subordinates, and cannot afford to spare one for Cuddapah.

7. Under the explanation now afforded, and with due deference to the orders of Government quoted above, I have the honor to solicit a re-consideration of the proposition made in the letters from this Office as per margin, which, while affording remuneration to the extent of Rupees 50 per mensem to the Subordinate officiating in Mr. Arnold's charge, in conformity with the Orders of Government No. 1,277, dated 5th July 1858, makes ample provision for the pay and travelling allowance of the additional Assistant Overseer required for the works in the Kalkadda Táluq, and moreover, leaves a balance of Rupees 40 per mensem to be carried to the credit of the State.

No. 1,708, dated 19th June 1861.
No. 3,298, dated 30th July 1861.

8. In the event of Government acceding to the foregoing recommendation, I have the honor to request their sanction to the disbursement of the Deputation allowance of Rupees 50 per mensem to Mr. Overseer ~~Howell~~ O'Neill, from the date on which he took charge of the Podatúr Range.

26th June 1861.

No. 125. ORDER THEREON, 13th September 1861, No. 1,718.

1. Under the circumstances now stated by the Chief Engineer the Government sanction, as a special case, the arrangement proposed by him in paragraph 7 of his letter.

2. The Government also authorize as recommended by Colonel Horsley, the disbursement of the Deputation allowance of Rupees 50 per mensem to Mr. ~~Howell~~ O'Neill, from the date on which he took charge of the Podatúr Range.

(Signed) J. D. SIM,
Secretary to Government.

No. 126. Read the following Proceedings of the Board of Revenue dated 24th June 1861, No. 3,275 :—

Read the following letter from Æ. R. McDONELL, Esq., Officiating Collector of Trichinopolly, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated 21st May 1861, No. 73.

SIR,

1. I have the honor to submit a report on the working of the Irrigation Cess for the year 1860-61.

2. The entry below exhibits the actual Collections and Disbursements under this head during the year :—

	RS.	A.	P.
Collections..	3,764	14	5
Disbursements.	3,406	4	3
Balance...	358	10	2

3. The water in the Cáveri ran low at a very early season of the year, and the only means of saving the cultivation was by continually throwing out temporary dams and thus divert the water down the main channels. Extra coolies were found necessary. These were employed, under the authority vested in me in paragraph 4 of Board's Proceedings, No. 3,070, dated the 13th of August 1858, at a cost of Rupees 190-14-2.

4. The Demand, Collection and Balance Statement shows a large arrear amounting to Rupees 2,184-4; this is rather less than it was last year, and every effort is now being made to reduce this balance. A voluntary cess, however, is seldom regularly collected. The greater portion of this sum will, I have no doubt, be soon recovered.

Items.	Demand.			Collection.			Balance.		
	Arrears.	Current.	Total.	Arrears.	Current.	Total.	Arrears.	Current.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Irrigation Cess......	2,097 12 3	3,362 15 8	5,460 11 4	1,963 5 1	1,670 11 2	3,634 0 3	134 7 2	1,692 4 6	1,826 11 8
Quit-rent on service lands......	151 14 0	336 8 10	488 16 10	114 12 10	16 1 4	130 14 2	37 1 2	320 7 6	357 8 8
Total...	2 249 10 3	3,699 8 6	5,949 2 9	2,078 1 11	1,686 12 6	3,764 14 5	171 8 4	2,012 12 0	2,184 4 4

5. The transfer of the Irrigation Establishment from the Department Public Works to the Collector was made on the 1st of July last; the change seems acceptable to the people. Complaints for water have been rare; the system has worked well, and much useless correspondence with the Engineer's Department has been saved.

6. I have already submitted a scheme for extending this cess to the old Conaud Táluq. The Ryots appear anxious that it should come early into operation. If sanctioned, the Irrigation Conservancy system will extend throughout the entire new Trichinopoly Táluq, which is formed of the two old Táluqs of Conaud and Lalgudi.

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1. Submitted for the information of Government, with reference to Extract Minutes of Consultation, 9th February 1857, No. 286, Public Works Department.

In Consultation 5th March 1858.

2. The operation of the Irrigation Cess in Lalgudi during the past year 1860-61 appears to have been on the whole satisfactory, though the amount collected during the year, viz., Rupees 3,764-14-5, has fallen short of that of the preceding year by Rupees 359-5-4. There was an outstanding balance at the close of the year of Rupees 2,184-4-4, of which only Rupees 171-8-4 belong to the accounts of the year preceding.

3. The proposal for the extension of the cess to Conaud is under reference to the Chief Engineer, and will be laid before Government in due course.

(A true Copy and Extract.)

(Signed) W. HUDLESTON, *Secretary.*

No. 127. ORDER THEREON, 13th September 1861, No. 1,719.

1. The foregoing report of the Irrigation Cess of Lalgudi in Trichinopoly, for the official year 1860-61, is satisfactory.

2. With reference to paragraph 16 of their Proceedings dated 30th October 1858, No. 2,306, the Government would wish to be informed whether the people of any other District have shown a disposition to have the customary labor rendered by them, commuted in the manner obtaining in Lalgudi.

(Signed) J. D. SIM,
Secretary to Government.

No. 128. Read the following Endorsement of the Chief Engineer, dated Chepauk, 6th September 1861, No. 4,670 :—

Read the following letter from Lieutenant-Colonel H. W. HITCHINS, District Engineer Presidency, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Madras, 23rd August 1861, No. 771.

SIR,

With reference to Proceedings of Madras Government and the Chief Engineer's orders thereon, No. 3,756, dated 9th instant, I have the honor to forward the accompanying estimate (approved of by the Officer in charge of the Government Central Museum) together with Abstract and Specification amounting to Rupees 70 for making and fitting up six pairs of glazed window shutters in the old window frames, and repairing a door, six windows and a bolt, also painting the same with one coat red paint and three coats of white paint for the small range of building to the south-west of the Museum.

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1 Estimate.
1 Specification.

1. Submitted to Government with reference to their Proceedings, No. 1,493, dated 7th August 1861.

2. The District Engineer has, under the same Proceedings, been directed to carry out the work provided for in the estimate, Rupees 70, at once from the general funds at his disposal.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 129. ORDER THEREON, 13th September 1861, No. 1,720.

Communicated to the Public Department, with reference to the Orders in that Department, dated 5th August 1861, No. 1,136.

(Signed) J. D. SIM,
Secretary to Government.

No. 130. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th September 1861, No. 4,675 :—

SIR,

1. As directed in paragraph 2 of the Proceedings of Government, No. 2,071, dated 5th October 1860, I have the honor to report that the following sums were disbursed in the month of July last under the Family Certificates left by the *first* and *second* batch of Stone Cutters who proceeded to the Alguada Reef Light House.

By the District Engineer, Godavery.

	RS.	A.	P.			
On account of the first batch for May 1861...	514	0	0			
Do. do. second do. for April 1861..	733	0	0	1,247	0	0

By the District Engineer, Presidency.

On account of the first batch for May 1861	104	0	0			
Do. do. second do. for do.	422	8	0	526	8	0
Total....				1,773	8	0

2. The above payments are included in the account submitted by me in a separate letter, No. 4,677, dated 6th instant.

No. 131. ORDER THEREON, 13th September 1861, No. 1,721.

Ordered to be communicated to the Accountant General with instructions to debit the sums specified to the Government of India.

(Signed) J. D. SIM,
Secretary to Government.

Ordered that the following letter be despatched.

No. 132 From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 13th September 1861, No. 1,722.

SIR,

I have the honor under the orders of the Governor in Council, to transmit copy of a letter from the Chief Engineer, dated 6th September 1861, No. 4,675, reporting that the sums specified in the margin were disbursed in the month of July last, under the Family Certificates left by the Stone Cutters who proceeded to the Alguada Reef Light House from this Presidency. The Accountant General has been instructed to debit the sums in question to the Government of India, and I am to request that a corresponding credit may be given in your books.

	RS.	A.	P.
By the District Engineer Godavery, for April and May 1861	1,247	0	0
By the District Engineer Presidency, for May 1861	526	8	0
Total..	1,773	8	0

No. 133. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 27th August 1861, No. 4,350 :—

SIR,

1. With reference to the Proceedings of Government No. 667, and 1,448, dated 21st March and 3rd August 1861, I have the honor to submit, for the orders of Government, the accompanying letter from the District Engineer of Coimbatore recommending the acceptance of Mr. Rohde's offer to purchase the machinery noted in the margin, at 25 per cent. below the valuation price.

4 Letters from the District Engineer of Coimbatore, Nos. 106, 107, 123 and 198, dated 15th and 28th June, and 7th August 1861.
1 Letter from Mr. Rohde, dated 24th June 1861.
1 Memorandum prepared in this Office.

Curzon's double-power Patent Atlas Press, original cost Rupees 1,500, present valuation Rupees 100.

2. On the 15th June last, the District Engineer of Coimbatore reported, that notwithstanding the Cotton Gin machinery had been advertized for sale for two months, no one appeared on the day appointed (1st June 1861) to bid for it. In another letter of the same date as above, Captain Goddard mentioned that Mr. H. B. Addis had made an offer for the machinery, &c., as per margin, at the prices entered in the valuation statement forwarded with his letter No. 445,* dated 20th February 1861, and recommended that his offer should be accepted, which was accordingly done, on the understanding that the money was paid prior to the removal of the articles.

Letter No. 106.

Proceedings of Government, No. 667, dated 21st March 1861.

No. 107.

	RS.
1 Devil Gin.	150
1 Wooden triangle and scales complete..	40
2 Iron ball weights of 132 lbs. and 130 lbs...	5
6 Do. ,, of 56 lbs. } 4 Do. ,, of 28 lbs. } 1 Do. ,, of 14 lbs. } 1 Do. ,, of 7 lbs. } 1 Do. ,, of 2 lbs. }	50

* *Vide* Proceedings of Government above quoted.

† 28th June 1861, No. 123.
‡ Dated 24th June 1861.

	RS.
Original cost..	2,100
Valued at	1,100

§ Original cost.	1,500
Valued at..	100

3.* Subsequently,† the District Engineer forwarded copy of a letter‡ from Mr. Rohde, offering to purchase the Lathe and Cattle Mill at 25 per cent. below the valuation price; and Lieutenant-Colonel Birdwood, then in charge of the Central Office, authorized Captain Goddard to dispose of them on these terms, as the sum at which they were valued was a little more than one-half the original cost; but as the Press§ now applied for by Mr. Rohde is valued at only one-fifteenth of its original cost, I consider a further reduction of 25 per cent. below the valuation price to be unreasonable and unnecessary; if the Press is worth any thing, it must be worth the low price put upon it, viz., Rupees 100.

4. In conclusion, I beg to request the sanction of Government to the sales already effected as per accompanying Memorandum. The sums realized will be brought to account as directed in their Proceedings No. 655, dated 27th April 1860.

No. 134. ORDER THEREON, 13th September 1861, No. 1,723.

1. The Government sanction the sale to Messrs. H. B. Addis and J. Rohde, of the unserviceable articles of machinery detailed in the Memorandum accompanying, the proceeds realized being reported at 1,070 Rupees.

2. For the reasons stated by Colonel Horsley in paragraph 3, the Government cannot consent to sanction the sale of the Patent Atlas Press applied for by Mr. Rohde, at 25 per cent. below the valuation set on it. The valuation price is but 100 Rupees, whereas the original cost is given at fifteen times that amount or 1,500 Rupees. The Press if in serviceable condition might be of use to the Railway Company.

(Signed) J. D. SIM,
Secretary to Government.

No. 135. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 3rd September 1861, No. 4,549 :—

SIR,

1. In their Proceedings No. 1,420, dated 30th July 1861, the Government were pleased to approve of the transfer of the undermentioned Officers to the Districts entered opposite to each :—

Captain Paxton from South Arcot to Salem.
Captain Clay from Salem to South Arcot.
Mr. R. E. Norfor from South Arcot to Salem.

2. The reasons which induced the Deputy Chief Engineer in charge of the Central Office to recommend the removal of Captain Clay from the Salem District were, 1st, that that Officer complained of ill-health, stated to have been caused by fever from which he suffered considerably at Kistnagherry, the head-quarters of his Range, and 2nd, that it was undesirable to accede to that Officer's request to recommend the removal of his fixed station from Kistnagherry to Oossoor, as the latter place, besides being situated at the extreme north-west limit of his Range, was a station in the vicinity of which there was but little work going on. Moreover, it was considered that if the above arrangement were carried into effect, it would necessitate a much greater amount of travelling on the part of the Executive Officer in his inspection of works than at present, and would also entail upon Government an unnecessarily large outlay on account of the travelling allowance of himself and his establishment.

3. From the accompanying letter from Captain Clay forwarded as an enclosure to the letter from the District Engineer Salem No. 92, dated 17th August 1861, it will be observed that that Officer prefers remaining at Kistnagherry to being removed to South Arcot, and considering that he has not suffered from fever during the current year; that the disease usually prevails at Kistnagherry for three months only, viz., from March to June, when he might reside at any other part of his Range; and that he suffered formerly from the same cause when he was attached to South Arcot and is not likely therefore to enjoy better health in the Range (Gingee) to which he would most probably be posted in the event of his transfer to that District, I beg to recommend that he may be allowed to remain in his present Range, and that Captain Paxton be re-transferred to South Arcot on being relieved of his present charge in Madura. As Mr. Norfor's substantive appointment is in the Salem District, his removal thereto, sanctioned in Proceedings of Government No. 1,420, quoted in paragraph 1, will remain in force.

Dated 30th July 1861.

4. In conclusion I would beg to observe, with reference to paragraph 3 of Captain Gahagan's letter No. 92 dated 17th August 1861, that although it has been found desirable in the Revenue and Police Departments to fix the head-quarters of the Sub-Collector at Oossoor and of the Head Assistant Collector and Assistant Superintendent of Police at Tripatore, the arrangement is by no means suited to the Public Works Department. Oossoor, as stated above, is situated at the extreme north-west limit of Captain Clay's Range, and Tripatore is, on the other hand, situated in the south-east portion thereof. Both places are therefore unsuited to the head-quarters of the Oossoor Range Officer for the reasons given in paragraph 2 of this letter, and under these circumstances I am precluded from recommending either of the District Engineer's propositions for the sanction of Government.

No. 136. ORDER THEREON, 13th September 1861, No. 1,724.

1. Under the circumstances here brought to notice, the Government authorize the Chief Engineer to retain Captain Clay in Salem, in cancelment of the order of the 30th July last transferring that Officer to South Arcot; and they approve of Captain Paxton being posted to South Arcot, on being relieved of his duties at Madura.

2. For the reasons stated in paragraph 4, the Government cannot alter the head-quarters of the Range Officer from Kistnagherry to Oossoor or Tripatore.

(Signed) J. D. SIM,
Secretary to Government.

No. 137. Read the following Endorsement of the Deputy Chief Engineer, in charge of Central Office of Public Works, dated Chepauk, 12th July 1861, No. 2,569:—

Read the following letter from Mr. R. KENNEDY, 1st Assistant District Engineer, to Captain A. S. MOBERLY, District Engineer of Madras, dated Adayár, 1st June 1861, No. 11.

SIR,

1. I have the honor to acknowledge receipt of copy of letter to your address from Lieutenant-Colonel Boileau, Deputy Chief Engineer, No. 840, dated 25th May 1861, and beg to submit the following report called for therein, regarding the condition of the Canal and the amount of allowances granted for repairs.

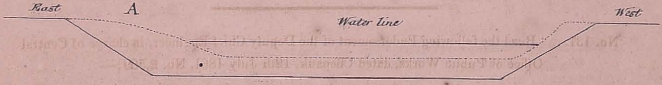
2. As regards Cochrane's Canal, as much improvement as I anticipated from the grant of increased allowances for two years has been effected, and a goodly portion is of a permanent character, such as excavating channels beyond their original depth and raising the embankments as protection from floods. Throughout the season we have been able to keep the navigation open, which could not be done until the present allowances were granted. The increase alone of toll collections during the past official year has been considerably more than the whole amount

of allowance repairs spent on the Canal, and as further improvements can be effected, I would strongly urge that the same amount for repairs be granted during the current year. In addition to current contingencies constantly arising, several miles of channel require to be deepened to equalize the depth of the whole.

3. With reference to the southern or Sadras branch, we have, during the last two years, effected improvements throughout its whole length; and although the water is now lower than it has ever been since the Canal was cut, owing to several months of draught; the drainage caused by the Salt manufacture; and evaporation, and a total absence of a source of fresh supply, the northern half extending from the Adayár southwards, 18 miles, is in a good navigable state. The other half was not originally finished to the proper depth, and our operations over it, in the course of which many miles have been deepened from 18 inches to 3 feet, have reduced the bottom nearly to a level throughout, and as owing to the causes above stated and the prevalence of strong breezes from the south, the water over the most of that distance is extremely shallow, it is indispensably necessary to take steps to prevent the total stoppage of the traffic to Sadras. With the wind from the north and the water about the same height in the Adayár as at present, there is always abundance of water throughout; but it will be a serious matter to render the navigation perfectly safe at this season of the year. Owing to the financial crisis the work, as per original construction estimate, was put a stop to, leaving a balance of Rupees 27,808-4-4 unexpended, the estimate being Rupees 2,18,873, and the amount expended Rupees 1,91,064-11-8.

4. I have tried to get a fresh supply of water by opening the bars, and with great difficulty we succeeded in increasing the height 6 inches at Sadras and about an inch in the Adayár, from the Adayár and Yedyoor bars respectively, and this enabled the passenger traffic to be continued. The level of the water at the south is much lower than at the Adayár owing to the south winds, a variation of which causes a difference of 2 feet, sufficient to render the Canal almost useless at times, at the Sadras end.

5. Another great evil has sprung up this season, which I did not notice before. In channels cut through the low ground without sufficient protecting banks the cloud dusts sweeping across the plains, principally from the eastward, have rapidly silted them up to a considerable extent. The following sketch taken from measurements during my last inspection, when I found the surface of the water in many places from 23 to 25 feet wide only instead of about 36 feet, will show what has been effected by that cause within the last few months.



The black line shows the original section and the dotted line the silting up, we have already cleared out a good deal of this; but unless something is done in the way of prevention the evil will continue. Where the banks are high the silting does not occur so, by which it seems that the dust is raised and carried across the Canal.

6. I am engaged in preparing the extra estimate you have called for, to deepen this portion of the Canal. Meantime, nothing else may be said in proof of the necessity of not curtailing our present allowances; I would rather in fact propose to endeavour to save from our expenditure upon the northern Canal, to have more available to expend on the southern branch, if that can be allowed; and with reference to our prospects after this year, I think it probable that the repair allowances may be reduced one-third on the northern Canal, any reduction on the southern branch will depend upon sanction being given to or withheld from the extra estimate you have called for, to improve the southern half of the Sadras branch and keep it in an efficient state at the worst seasons.

MEMORANDUM.

No. 227.

Forwarded to the Deputy Chief Engineer Central Circle, with reference to letter, No. 840 of the 25th May 1861.

Camp Gooumsoodspoondy, 4th June 1861. (Signed) A. S. MOBERLY, Captain, *District Engineer of Madras.*

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1. Submitted to Government, with reference to paragraph 5 of their Proceedings No. 1,354 dated 3rd June 1859.

2. The Government will observe that good reason is given for making no reduction at present in the maintenance allowance of either the northern or southern Canals. Some re-arrangement will probably be required in the grant made for 1862-63.

3. The Deputy Chief Engineer in charge deprecates the proposal to take any sum from the northern for the southern Canal.

4. Suggestions will be made to the District Engineer Madras, with a view to remedy the evil complained of in paragraph 5.

5. The estimate alluded to in paragraph 6 will be forwarded to Government as soon as received.

(Signed) W. I. BIRDWOOD, Lieut.-Colonel,
Deputy Chief Engineer in charge of Central Office of Public Works.

No. 138. ORDER THEREON, 14th September 1861, No. 1,725.

1. The Government sanction the continuance, for the current year, of the allowance of Rupees 200 per mile or Rupees 19,600 in all per annum for the East Coast Canal, authorized under date 3rd June 1859, No. 1,354; this sum being provided for in the Budget.

2. The Chief Engineer will in his next report on the Canal, submit the result of the suggestions made to the District Engineer for preventing sand from drifting into the Canal.

(Signed) J. D. SIM,
Secretary to Government.

No. 139. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd September 1861, No. 4,521 :—

SIR,

1 Letter from District Engineer Nellore, No. 1,376, dated 7th August 1861.
1 Estimate.

1. With the accompanying letter the District Engineer of Nellore submits an estimate for Rupees 2,240, for work absolutely necessary to be done to the Survapalli Channel before the irrigating season sets in.

2. This channel was intended to have been excavated to a width at sole of six yards, but owing to a scarcity of labor the late Acting District Engineer reduced the width *pro tempore* to three yards. The upper portion of the canal was, however, commenced so as to provide for the whole width of six yards at bottom, and consequently it is only necessary to widen the lower part of the excavation to make it effective during the present season.

3. The estimate for this work was Rupees 64,300, and the allotment in the Budget for 1860-61 was Rupees 48,580.

4. Of this the Acting District Engineer, who was at the time in Madras attending the trial of Sub-Overseer Shannon, reported on the 23rd April last, that he expected the expenditure up to 30th idem would be about Rupees 42,580, or about Rupees 6,000 less than the allotment in the past year, which it was anticipated would have been expended by the close of that year. I accordingly authorized* him to lay out the unexpended balance of Rupees 6,000, which Captain Mullins reports has been spent and exceeded, for reasons to be hereafter given in a report which he is preparing relative to this channel, and begs that an allotment of Rupees 10,000 in all for the current year may be sanctioned, which will be sufficient to make the channel effective during the present season.

* In Proceedings No. 713, dated 21st May 1861.

5. I would here observe, however, that the Acting District Engineer subsequently† reported that he had made a mistake in his conjecture as to the amount that would be expended up to 30th April last, which proved to be Rupees 45,827, instead of 42,580, thus leaving Rupees 2,753 only to be worked out from last year's allotment. The District Engineer has been wrong, therefore, in exceeding the sum without previous reference, as the Rupees 6,000, which as above stated I had authorized him to expend, was only so authorized on the supposition that it was the unexpended balance of the past year's allotment, which should have been worked out prior to 30th April 1861. This balance ought to have been included in the list of unfinished works submitted to Government on the 19th August 1861, but was, by an oversight, omitted, having been omitted in the Return received from the District Engineer Nellore.

† No. 753, dated 16th May 1861.

6. As the District Engineer represents that the present estimate of 2,240 is emergently required, and the Collector‡ has likewise intimated that this channel is not properly effective, and as the Government in their Proceedings of 15th May 1861, No. 943, intimate their desire that the channels from the Penár Anicut shall be pushed on as much as possible, I beg to recommend that the amount Rupees 10,000 may be sanctioned from the reserve fund.

‡ Letter No. 267, dated 31st July 1861.

No. 140. ORDER THEREON, 14th September 1861, No. 1,726.

1. Under the circumstances stated, the Government sanction the estimate amounting to Rupees (2,240) two thousand two hundred and forty, for work required to be done to the Survapalli Channel in the District of Nellore.

2. As for the allotment of Rupees 10,000 for the channel, recommended to be sanctioned out of the reserve fund, the Government observe that the amount set apart in the Budget for unforeseen works cannot be further reduced at present.

(Signed) J. D. SIM,
Secretary to Government.

No. 141. Read the following letter from Lieutenant-Colonel CUTHBERT DAVIDSON, C.B., Resident at Hyderabad, to J. D. SIM, Esq., Secretary to Government, dated Hyderabad Residency, 5th September 1861, No. 1,367 :—

SIR,

1. I have the honor to acknowledge the receipt of your letter No. 1,652, dated the 30th August 1861, and in reply I beg to inform you that I shall be happy to address His Highness the Nizam's Government on the subject of the transfer of certain land required by the Madras Irrigation and Canal Company ; but I would, in the first instance, solicit your attention to the correspondence which has already passed on this subject as noted in the margin.

1. From Resident, to Chief Secretary to Government Fort Saint George, No. 1,649, dated 8th November 1859.
2. To Chief Secretary, No. 1,863, dated 14th Dec. 1859.
3. From Chief Secretary to Resident, No. 18, dated 4th January 1860.
4. From do. No. 768, dated 16th April 1860.
5. To do. No. 824, dated 21st April 1860.
6. From Captain Rundall, 10th December 1859.
7. From Resident to Captain Rundall, No. 1,862, dated 14th December 1859.
8. From Captain Rundall, No. 17, dated 27th Dec. 1859.

2. In this correspondence I am informed that sanction to the commencement of any work of this nature will not be accorded until the requisite permission from His Highness the Nizam has been obtained, and also that all existing rights will be strictly preserved.

3. I am aware that His Highness will at once request to be assured that this Anicut will be erected on such a principle as will ensure to his side of the river a supply of water equal to that provided for the British bank of the river, should he at any time feel disposed to enter into arrangements for the construction of works necessary for this purpose, and it is therefore very desirable that I should be placed in a position to afford a full assurance to the Nizam that this will be done.

No. 142. ORDER THEREON, 14th September 1861, No. 1,727.

Ordered that a copy of this letter be furnished to the Consulting Engineer for the Irrigation and Canal Company, with reference to his letter dated 17th August 1861, No. 20, and that he be requested to submit his opinion on the subject of paragraph 3 of the letter of the Resident at Hyderabad without delay.

(Signed) J. D. SIM,
Secretary to Government.

No. 143. Read the following letter from Captain F. H. RUNDALL, Consulting Engineer for Madras Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 19th August 1861, No. 22 :—

SIR,

1. The Agent has forwarded the accompanying correspondence* received from the Chief Engineer relative to the services of the Medical Officer at Cuddapah, Mr. Howell, who considers that Rupees 50 is not a sufficient remuneration for his services, which he declines to furnish except at the rate of Rupees 100 per month.

* No. 723, dated 6th August 1861 —to be kindly returned.

2. The establishment in the Pennár Division at present, according to the Chief Engineer's statement, is as follows :—

1 Executive Engineer	2 Surveyors
1 Assistant Engineer	4 Clerks and Draughtsmen
1 Sub-Assistant Engineer	20 Lascars

and as the Chief Engineer states that the Medical Officer is not expected to attend families, without further recompence, it would appear that the fee of Rupees 100 per month is incommensurate with the services he is likely to be called upon to perform, especially as at other stations, such as Bellary, Kurnool, and Nellore, wherever the services of a Medical Officer have been applied for, a fee of Rupees 50 per month has been accepted.

3. The Government in their Order of the 1st July 1861, No. 1,212, sanctioned this amount for the services of the Medical Officer at Cuddapah, but as I conclude it is optional with himself to render his aid or not, it will, in consequence of his refusal, be necessary to employ an Apothecary not in the Government service, whose services would be available for every one, establishment, families, laboring parties, and all ; the fee of Rupees 100 per month for the very partial service purposed to be rendered by the Surgeon at Cuddaph being unnecessarily high.

No. 144. ORDER THEREON, 14th September 1861, No. 1,728.

1. The Governor in Council considers that all Surgeons in Government employ are bound to render medical advice and assistance to Officers and servants in the employment of the Irrigation and Canal Company, when required by Government to undertake that duty, and at such rates of remuneration as Government may deem expedient. He observes that Rupees 50 per month is the fee hitherto allowed for attendance on the employés of the Railway and Irrigation and Canal Companies. The Zillah Surgeon of Cuddapah will, therefore, be ordered to afford medical aid to the Officers and Subordinates of the Irrigation and Canal Company attached to his District, at the same rate of remuneration, viz., Rupees (50) fifty per mensem.

2. As for the families of the Officers, separate fees will be allowed to the Civil Surgeon for medical aid afforded to them, provided such were paid to the Surgeons at Nellore and Kurnool for similar service.

(Signed) J. D. SIM,
Secretary to Government.

No. 145. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 26th August 1861, No. 4,308 :—

SIR,

1 Letter from District Engineer Trichinopoly, 3rd August 1857, No. 424.
1 Do. do. do. do. 12th August 1857, No. 501.
1 Do. do. Mr. Godfrey, 22nd August 1857, with one enclosure.
1 Do. do. District Engineer, Trichinopoly, 1st Sept. 1857, No. 641, with one enclosure.
1 Do. do. do. do. 6th March 1861, No. 1,414, with one enclosure.
1 Do. to do do. 14th, " " " 10,944.
1 Do. from do. do. 15th, " " " 1,468, with one enclosure.
1 Do. to do. do. 3rd April " " 11,556.
1 Do. from do. do. 6th " " " 1,591.
1 Do. do. do. Madura, 6th June " " 154, with one enclosure.
1 Do. do. do. do. 28th " " " 294.
1 Do. to do. do. 6th July " " 2,426.
1 Do. from do. do. 11th " " " 385.
1 Do. to do. Trichinopoly, 23rd July 1861 " 2,986.
1 Do. from do. do. 26th " " " 471.
1 Do. to do. do. 30th " " " 3,289.
1 Do. from do. do. 5th Aug. " " 544, with one enclosure.

1. With reference to the Orders of Government, No 908, dated 7th May 1861, I have the honor to forward herewith the correspondence, as per margin, with Captain Ryves' District Engineer of Madura, in which that Officer repudiates his responsibility in the matter of the balance of Rupees 61-15-10 outstanding in the accounts of the Trichinopoly District, but for which the Govenment have, in their Orders above quoted, held him personally liable.

2. In the first of the letters marginally quoted Captain Ryves affirms that the defalcations alluded to in the first portion of my letter to Government, No. 12,436, dated 25th April last, were discovered by himself when on a tour of inspection ; that the attention of the Executive Officer in charge of the Range was directed to the matter, and that he had decided on accepting Mr. Godfrey's resignation only on receiving from the Executive Officer, Mr. Harington, an acquittance in favor of that individual. Captain Ryves also forwarded an original letter from Mr. Harington stating that to the best of his recollection he had informed Captain Ryves prior to his acceptance of Mr. Godfrey's resignation, that the Sub-Overseer had "accounted to him for the expenditure of monies advanced," and that on *subsequent* examination and measurement of works that had been entrusted to Mr. Godfrey, the error in the accounts was discovered. Under these circumstances Mr. Harington considered himself personally liable for the amount due by Mr. Godfrey ; and Captain Ryves being under the impression that the circumstances of the case were not faithfully narrated to Government, requested that the same might be correctly laid before them. He was called upon to state specifically the points in which he considered that I had misrepresented the case to Government; but having no record of the correspondence in question, he remarked that he was not in a position to comply with the requisition made by this Office, and he requested therefore that his first letter of the 6th June 1861, No. 154, and Mr. Harington's letter which accompanied it, might be laid before Government for consideration and orders. In now doing so, I am constrained to trouble Government once again with the entire correspondence on the subject of the balance under notice, and to add a few brief observations.

Dated 27th May 1861, No. 17, to District Engineer, Madura.

6th July 1861, No. 2,426.

3. Mr. Harington in his letter accompanying Captain Ryves' communication of the 6th June 1861, No. 154, considers himself responsible for the balance, on the ground that he had reported to Captain Ryves that Mr. Godfrey had accounted to him for the expenditure of all advances. Lieutenant Palmer having omitted to furnish this Office with copy of the report to which Mr. Harington referred, was called* upon for the same and he has now forwarded a transcript of the document† in question, which, though professing to absolve Mr. Godfrey from all responsibility in the matter of advances made to him, conveys at the same time doubts as to the accuracy of his accounts of certain works which he had hoped to clear up in two or three days. I conceive that admitting even that Mr. Harington had written nothing further on the subject,

* 30th July 1861, No. 3,289.
† Dated 12th June 1857.

which, however, was not actually the case, Captain Ryves would not have been warranted in accepting Mr. Godfrey's resignation without the further report promised by Mr. Harington on the matter; but the letter from Mr. Harington to Captain Ryves' address dated 20th June 1857, No. 33 (upwards of a month prior to Mr. Godfrey's resignation), wherein the balance of Rupees 61-15-10 is shown as still to be accounted for, must clearly be held to cancel the previous acquittance in Mr. Godfrey's favor, and to throw the onus of responsibility on Captain Ryves. Lieutenant Palmer states that he has carefully examined the Records of his Office and cannot find that any subsequent acquittance was sent in by Mr. Harington prior to the acceptance of Mr. Godfrey's resignation. Moreover, Captain Ryves' letter of the 1st September 1857, No. 641, and more particularly paragraph 3 of the Memorandum which accompanied it, shows that that Officer was aware that the balance under notice was outstanding in the accounts; and even admitting the plea that Mr. Harington was held responsible for the defalcation, it was clearly Captain Ryves' duty in accordance with such conviction, and adverting to the acceptance by the former of the responsibility, to have required the adjustment of the account at once. Instead of this the matter was apparently lost sight of subsequently during Captain Ryves' tenure of office as District Engineer of Trichinopoly, which did not cease until nearly a year after. His successor Captain F. Moberly, as already explained in paragraph 7 of my letter No. 12,436, dated 25th April 1861, although he also was aware that the balance was outstanding, and acquiesced in Mr. Harington's proposal to replace the money, yet took no steps to see that it was replaced.

4. Having now stated the case fully and faithfully as I believe, I shall leave the question of Captain Ryves' responsibility in the matter of the balance for the decision of Government. Captain Ryves has paid the amount of the balance to the District Engineer of Trichinopoly as ordered by Government; but he requests that his letters on the subject may be laid before them in the hope that the explanations therein contained will lead to a reversal of the decision passed in the case.

28th June 1861, No. 294.

5. In conclusion, I beg to add that Mr. Harington, prior to the receipt of the orders of Government, paid to the District Engineer of Trichinopoly the balance in question (Rupees 61-15-10); but as the Central Office was not at liberty to accept that Officer's adjustment of it as correct, the District Engineer was instructed to return the money which he reports having done.

7th May 1861, No 908.
23rd July 1861, No. 2,986.
26th do. No. 471.

No. 146. ORDER THEREON, 16th September 1861, No. 1,729.

On a careful consideration of the whole case and of what has now been urged, the Government see no reason whatever for absolving Captain Ryves from responsibility for the outstanding balance of Rupees 61-15-10, for which in their Order of the 7th May last, No. 908, he was held liable.

(Signed) J. D. SIM,
Secretary to Government.

No. 147. Read the following letter from Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 5th September 1861, No. 26:—

SIR,

The Agent submits the accompanying letter* from the Chief Engineer representing the difficulty he meets with in obtaining qualified Draughtsmen and Estimators to meet the requirements of his establishment, and proposing as a remedy to form a class of boys or young men for instruction. He states that he

* No. 3?7 of 30th August 1861.

has two promising pupils now under training, and while there is a vacancy in his Office he is able to give one of them a salary of 10 Rupees. The proposal for which he requests the sanction of Government is to increase the class to six in number and to pay them according to proficiency as follows:—

			RS.
2 at	Rupees	15	30
2 at	,,	10	20
2 at	,,	8	16
	Total............		66

There is at present a vacancy of Rupees 65 in his Office and the balance Rupee 1 he can provide for from the sum sanctioned for the establishment, as this is the best and readiest means he can adopt for securing a class of servants of the scarcity of whom there is a general complaint, I would beg to recommend the Chief Engineer's proposal for sanction.

No. 148. ORDER THEREON, 16th September 1861, No. 1,730.

The proposal of the Chief Engineer of the Irrigation and Canal Company to maintain a class of boys, to be trained as Draughtsmen and Estimators, at a cost of Rupees (66) sixty-six per mensem, is sanctioned on the condition that no extra cost is incurred thereby.

(Signed) J. D. SIM,
Secretary to Government.

No. 149. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th September 1861, No. 4,668:—

SIR,

1 Original letter, dated 26th July 1861, No. 473, with one enclosure.
1 Original letter, dated 19th August 1861, No. 657, with one enclosure.

1. With reference to the Proceedings of Government dated 20th June 1861, No. 1,133, placing the services of Mr. R. Smith, 1st Assistant District Engineer, at the disposal of the Madras Irrigation and Canal Company for a further period of three years, I have the honor to recommend that Mr. Ricketts, who is now acting for him in the Trichinopoly District, may be confirmed in the appointment of 1st Assistant District Engineer, and that Mr. Smith's name be entered in the Departmental list as a Supernumerary 1st Assistant while employed in the service of the above Company.

2. Mr. Ricketts has been acting as a 1st Assistant District Engineer, at first for Captain Stoddard, and subsequently for Mr. R. Smith, since September 1859, and from November following he has been in receipt of the full allowances of that grade, agreeably to the sanction given in the Proceedings of Government dated 16th November 1859, No. 2,674; but notwithstanding this, he will not, in the event of his obtaining leave on private affairs or under Medical Certificate, be entitled to any other than the allowances of his substantive appointment of 2nd Assistant District Engineer, so that in case of sickness he is at present liable to a great loss of salary. Considering, therefore, the very favorable manner in which he is spoken of by the Acting District Engineer of Trichinopoly, and the length of time he has now been acting in the higher grade, I concur in opinion with that Officer, that he, Mr. Ricketts, is fully deserving of the promotion which I have above recommended him for.

Vide accompanying letter, dated 26th July 1861, No. 473.

3. Should this arrangement be sanctioned, I have further to recommend that Lieutenant Mead of the Engineers, whom I recently nominated for re-appointment to the Department as Acting 2nd Assistant District Engineer, *vice* Ricketts, may be

In letter dated 12th August 1861, No. 3,837.

confirmed as 2nd Assistant District Engineer in the place of that Officer from the 15th July 1861, the date on which he passed the prescribed examination in the vernacular, and that he be allowed to draw pay as such from the same period, as Mr. Ricketts' salary as 2nd Assistant District Engineer is fully available for the purpose.

No. 150. ORDER THEREON, 16th September 1861, No. 1,731.

Sanctioned.

(Signed) J. D. SIM,
Secretary to Government.

No. 151. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th July 1861, No. 2,807 :—

SIR,

1. I have the honor to bring the following circumstances to the notice of Government connected with the refusal of the Collector of Tanjore to publish certain notices in the local Gazette, sent by the District Engineer. In order that the arguments of both the Collector and District Engineer may be viewed at one glance, they are below placed in juxta-position :—

2 Letters from the District Engineer, Nos. 87 and 37, dated 30th June 1860 and 3rd June 1861.
1 Proceedings from Board of Revenue No. 2,469, dated 15th May 1861, with 2 enclosures.

District Engineer's reasons.

[*Vide* letters Nos. 87 and 37, dated 30th June 1860, and 3rd June 1861.]

That several ordinary estimates had been objected to by the Collector as not requiring to be carried out at the expense of Government; that as the Mirásidárs were constantly referring to him on the subject, he wished to publish a list of all such estimates with a two-fold object in view, viz., (1), of showing them what works they are to carry out at their own expense ; and (2), also of placing on record the names of such channels for which repairs are not to be executed at the cost of Government, inasmuch as many works injured by the floods, and properly falling to the share of the Mirásidárs, were undertaken by this Department as exceptional cases.

That on a previous occasion, also, the Collector declined to publish an advertisement of sales of avenue trees, on the plea that it was not of sufficient interest. That since the Railway Department have required a very large supply, there is a great difficulty in procuring firewood; that the avenues formerly afforded a very large proportion of the fuel required for the Department of Public Works, and there is no reason why this should not be the case in the present day.

That he was not aware that the local Gazette had been established for the publication of the Collector's notices alone; that he was the proper party to judge of the notifications necessary for his Department and for matters connected therewith; and that he was not aware also that the Collector had power to decline advertisements on public business.

Collector's reasons.

[*Vide* letter No. 260, dated 22nd August 1860.]

That the notices sent by the District Engineer were of two descriptions, viz., one was lists of ordinary estimates for clearing channels ; and the other connected with the sales of avenue trees.

(1.) *Estimates.*—That no fewer than 118 estimates had been objected to by him as not requiring to be carried out at the public expense ; and the District Engineer requested that these estimates should be inserted in the local Gazette, with a view to the Mirásidárs being informed that the clearing of these channels was to be done at their own cost and not at Government expense. That he demurred to this proposition and suggested that the object might be better and more efficiently attained if the Subordinates of the Public Works Department were directed not to prepare such estimates, leaving the Mirásidárs to carry out the necessary works at their own expense.

(2.) *Avenue trees.*—That no such general sales is held in Tanjore; that there are no avenues capable of yielding any considerable quantity of timber or fuel; that the trees are disposed of individually as they are found decayed or otherwise unfit for shade; and that by a Circular issued by him, recently, notice is given by Tahsíldárs to local officers of the Department of Public Works of every sale of avenue trees in the District.

That the supply of type in his Office was limited, and that therefore when notices are sent for publication he must have some discretion in declining to insert, or in condensing them to such an extent as may appear necessary.

* No. 260, dated 22nd August 1860.

† No. 3,101, dated 27th July 1860.

‡ No. 2,469, dated 15th May 1861.

2. In communicating copy of the letter* from the Collector, the Board of Revenue, to whom the question as to whether notifications connected with the business of the Public Works Department sent by the District Engineer should, or should not be published in the local Gazette was referred,† remarked that they considered‡ "that a limited discretion must be left to the Collector as to the publication in the District Gazette of notices sent for insertion, but as a rule it is his clear duty to afford every facility to the Officers of Government in every Department to avail themselves of the means provided by the Gazette for advertising on public matters."

No. 2,271, dated 22nd September 1859.

3. The Government Orders, as per margin, upon this head are certainly very clear, and while quite concurring with the Board of Revenue in thinking that a certain discretion should be allowed to the Collector to publish or not notices that are sent to him, yet in the present instance I am of opinion that Captain Oakes has shown good reason why the advertisements in question should be entered in the Gazette, and in the particular case of Tanjore where unhappily there is not that cordial co-operation between the Collector and the District Engineer which ought to exist. I think it would have been wise in Mr. Cadell to have acceded to Captain Oakes' request, as he must have anticipated that his refusal to do so would only lead to controversy, and his proceeding in forbidding the publication might be looked upon as another instance of his thwarting the operations of the Public Works Department.

No. 152. ORDER THEREON, 16th September 1861, No. 1,732.

1. The Governor in Council does not see the necessity of this reference. The Board of Revenue laid down the principle to be followed in regard to the management of District Gazettes, and the Officiating Chief Engineer concurred in their view ; there was nothing therefore to prevent the dispute being settled by these authorities in communication with each other.

2. The rule laid down by the Board is correct, and Mr. Cadell will be guided by it in future. If any doubt is felt as to any particular document, the Chief Engineer and the Board will mutually decide it ; the Government object to having their time occupied with these matters and to mere differences of opinion on trivial matters being invested with so much importance.

(Signed) J. D. SIM,
Secretary to Government.

No. 153. Read the following Proceedings of the Madras Government in the Public Department, dated 12th September 1861, No. 1,304 :—

Sanctioning the alterations to the new Travellers' Bungalow at Paumben, to adapt it for a Telegraph Office. } (Vide Public Proceedings, 12th September 1861, Nos. 42-43.)

No. 154. ORDER THEREON, 16th September 1861, No. 1,733.

Ordered to be communicated to the Chief Engineer.

(Signed) J. D. SIM,
Secretary to Government.

No. 155. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th July 1861, No. 3,255:—

SIR,

No. 540, 16th March 1861.

1. In Order, as per margin, Government returned several letters relating to various Chapters of the new Code, remarking that it was inexpedient to consider them at present as the constitution and organization of the Department was under the consideration of Government, and that they might be re-submitted hereafter with such modifications as might appear requisite.

2. It possibly escaped notice at the time that many of the documents belonged to Chapters of the Code which had already been published and brought into use, and as the utility of these Chapters is in a great measure neutralized for want of the forms, I would suggest the expediency of publishing these forms which it is improbable any change in the constitution of the Department would cause any alteration in; such as Specifications, Estimates, Statements of rates and prices, Registers of irrigation works; and I accordingly submit the following, the publication of which would save many Circulars and letters that it is now requisite to write respecting Chapters of the Code already published:—

No. 4. Detailed Estimate for the construction or restoration of an irrigation work.
,, 5. Abstract of do.
,, 6. Detailed Estimate for the construction of a road.
,, 7. Abstract of earthwork and metalling for a road.
,, 8. Detailed Estimate for a road, tunnel, or a bridge of one arch.
,, 9. Do. for a bridge of more than one arch.
,, 10. Abstract Estimate for the road including tunnels and bridges.
,, 11. Detailed Estimate for a building.
,, 12. Abstract for do.
,, 13. Abstract Estimate for a bridge, if it is an isolated work.
,, 14. Specifications to accompany all Estimates for Tanks.
,, 15. Do. for Roads.
,, 16. Do. Bridges.
,, 17. Do. Buildings.
,, 18. Do. Anicuts, Calingulas, large Sluices, &c.
,, 19. Half-yearly statement of rates and prices.
,, 20. Register of all irrigation works.
,, 21. Monthly list of minor new works.
,, 22. Monthly statement of repairs.
,, 29. Proceedings of Court of Inquest.

No. 156. ORDER THEREON, 17th September 1861, No. 1,734.

The Government observe little material difference between the forms now in use and those submitted with this letter; and they are loath to incur the additional cost of printing until they have decided on the future constitution of the Department. The Chief Engineer is requested carefully to consider the subject and state whether the existing forms cannot continue to be used without much inconvenience, and if not, to select those of the new forms which he deems it essential to print at once.

(Signed) J. D. SIM,
Secretary to Government.

No. 157. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 16th August 1861, No. 3,980 :—

SIR,

1. I have the honor to submit for the orders of Government the accompanying papers from the District Engineer of Tinnevelly, on the subject of the alterations necessary to be made in the Ranges of that District to adapt them to the boundaries of the new Táluqs, sanctioned in the Proceedings of Government, dated 17th April 1860, No. 584, Revenue Department.

1 Original letter, dated 24th July 1861, No. 88, with two Statements and 1 Map.

2. The arrangement proposed by Captain Winscom is as follows :—

Number and class of Range. No.	Number and class of Range. Class.	Name of Range.	Táluqs.	Area in square miles.	Fixed stations.
1	1st Class.	Tinnevelly	Tinnevelly. Tenkarai.	850	Strivengundom.
2	2nd do.	Ambrasamudrum	Ambrasamudrum. Tenkarai.	925	Ambrasamudrum.
3	2nd do.	Strivalliputtur	Strivalliputtur. Sankaraninarcoil.	1,178	Strivalliputtur.
4	3rd do.	Sattur	Sattur. Oottapadarum.	1,539	Covilputti.
5	4th do.	Nanganeri	Nanganeri.	651	Nanganeri.

3. By this distribution each Range will, as the District Engineer remarks, be more compact in itself than at present, and will coincide with one or more of the new Táluqs, while as respects No. 4 Range, the charge will, notwithstanding its extent, not be more onerous than that of the other Ranges, a large proportion of it being occupied by the Zamíndári of Ettiapuram.

4. The fixed stations are as central as they can well be, and as the proposed changes are strongly recommended by Captain Winscom, and will not entail any extra expense to the State on account of Office establishments, I request that in accordance with his application, sanction may be granted for the re-distribution as explained above, taking effect from the *1st May* 1862, in order not to interfere with the executive arrangements of the current official year, and to prevent confusion in the accounts.

				RS.
Present cost.—	1	1st Class Establishment	....	120
	2	2nd do.	....	200
	1	3rd do.	....	75
	1	4th do.	....	60
			Total....	455
Proposed cost.—		do. do.	do.	

5. A sketch map of the District showing the present and proposed Ranges is herewith forwarded.

No. 158. ORDER THEREON, 17th September 1861, No. 1,735.

The Government sanction the re-distribution of executive Ranges and Establishments in the Tinnevelly District, proposed in this letter, without extra cost to the State; the arrangement, for the reason stated in paragraph 4, taking effect from the 1st May 1862.

(Signed) J. D. SIM,
Secretary to Government.

No. 159. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th June 1861, No. 2,102:—

SIR,

1 Letter from Accountant General, 24th June 1861, No. 681, with
1 Account Current.
1 Account Current of the Chief Engineer for February 1861.

*Proceedings of Government, No. 460, dated the 7th March 1861.
Do. No. 861, dated the 30th April 1861.

1. I have the honor to forward herewith a letter from the Accountant General, dated the 24th instant, No. 681, with a new form of monthly Account Current to be rendered to his Office, commencing with the accounts for May 1861. This form is furnished with reference to the Proceedings of Government, noted in the margin,* and is intended to present the expenditure on works, under four separate heads, as entered in the general Budget for all India, viz., "Charges against Income," "Army and Navy," "Works of internal improvement and public convenience," and "Civil Service," with particulars, under several minor heads, subordinate to each of the above.

Municipal.
1. Town buildings.
2. Markets.
3. Paving, &c., of streets.
4. Lighting.
5. Water supply.
6. Sewage.

Marine.
7. Harbours and navigation.
8. Lighthouses.

Industrial.
9. Mines.
10. Manufactures.

Agricultural.
11. Irrigation canals.
12. Tanks.
13. Dykes.
14. Drainage.
15. Forests.

Communications.
16. Metalled roads.
17. Unmetalled roads.
18. Bridges.
19. Boat bridges and ferries.
20. Navigable canals.
21. River improvements.
22. Accommodation for travellers.

Proceedings of Government, No. 460, dated 7th March 1861.

2. Under the head, "Works of internal improvement and public convenience," the Accountant General requires that expenditure should be shown separately for each of the 22 Sub-Divisions, noted in the margin; being the heads specified on the Report of the Budget and Audit Committee, referred to in Proceedings of the Madras Government, No. 428, dated the 4th March 1861. These same heads are exhibited in the Public Works Budget under "*Public,*" the 2nd Class of the main division of works, and if these particulars are to be inserted in the Accounts Current to be furnished to the Accountant General by this Office, it will be necessary that the Accounts Current furnished by District Engineers, as well as the Progress Reports, should be altered in classification accordingly, which is exactly what was suggested in the Chief Engineer's letter of the 28th March 1861, No. 11,493; but which it appears the Government are not now prepared to carry out, and did not even expect that such would be necessary in this year's accounts. It will thus be seen that (though the Accountant General has observed that the accounts of this year *should be rendered in the form hitherto in use,* excepting such modifications suggested by the Budget and Audit Committee) these modifications are not inconsiderable, but numerous, and involve a thorough change in the preparation of the accounts, which will be more clearly perceived by Government, on a comparison of the form provided by the Accountant General with one of the Chief Engineer's Accounts Current for the past year herewith submitted.

"Charges against Income."
"Army and Navy."
"Civil Service."

3. The particulars required to be shown under the three other general heads in the general Budget, are those which appear in the Public Works Budget under the one head of "*State;*" but the several minor heads given by the Accountant General for adoption in the Account Current to be rendered to him, do not correspond with the sub-divisional heads provided in the Public Works Budget for 1861-62, under "State." It is not explained why a difference has been made.

No. 1,124, dated 18th June 1861.

4. I would here beg to remark, that in the statement communicated in Proceedings noted in the margin, showing the total charges of this Presidency provided for in the general Budget for all India, "Public Works and buildings" are shown under one separate head, and not under four general heads as in the form given by the Accountant General, and in a marginal note to the Circular of the Financial Secretary to the Government of India, communicating the above statement, it is stated that the general distribution of the total sum allotted for public works will be made by the Public Works Department and communicated to the several Governments. This has been done in the Orders communicated in Proceedings of the 23rd ultimo, No. 981, and the Government of India, in doing so, do not adopt the four divisions, or heads, noticed by the Budget and Audit Committee, but enter the assignment for public works under the two main divisions of "State" and "Internal improvements," with the amounts under each subordinate head.

5. From the above it would appear that it is not intended by the Government of India that the classification adopted in the Public Works Department should be changed for that suggested by the Budget and Audit Committee, in any accounts to be submitted by this Department.

6. I have the honor, therefore, to request that the Government will be pleased to determine whether any change is to take place immediately as required by the Accountant General, or not?

No. 160. ORDER THEREON, 17th September 1861, No. 1,736.

The Government have already in paragraph 3 of their Order dated 30th April 1861, No. 861, directed the Chief Engineer to communicate with the Accountant General and introduce such changes in the Account Current as may be necessary. The Accountant General is the duly constituted and responsible authority to compile the Financial Returns according to the forms and rules prescribed by the Government of India, and the Government cannot interfere as regards the mere form of accounts and returns required by him to meet the wishes of the Supreme Government and involving no change of system.

(Signed) J. D. SIM,
Secretary to Government.

No. 161. Read the following Endorsement of the Chief Engineer, dated Chepauk, 3rd September 1861, No. 4,555 :—

Read the following letter from Captain G. W. WALKER, District Engineer North Canara, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Sircy, 12th August 1861, No. 84.

SIR,

1. I have communicated on the subject of Order No. 2,172 of 1st July, with Commander Fraser of H. M.'s Sloop of War "Falkland" at Sedasheghur, and have the satisfaction to report that Officer's assurance that he "will be happy to render any assistance in his power, should "the services of himself, Officers or crew, be deemed useful," either in fixing the Beacon Buoys at Tuddry, in putting down the screw moorings at Beitkál, "or in any other work."

2. Commander Fraser states that "without visiting Tuddry, he is unable to furnish any "accurate estimate of the probable expense of laying down the Beacon Buoys in the river "channel." But he adds that the quickest and most economical method of executing the work, would be by detaching the "Falkland's" pinnace to Tuddry in the fine weather; "the expense of "which would probably not exceed Rupees 500 to Rupees 650, inclusive of wear and tear of "materials, and batta to Officers and crew employed."

3. The total outlay for these Buoys may therefore be stated as likely to amount to Rupees 2,500, as per following rough estimate :—

	RS.	A.	P.
Value of Buoys complete	1,431	7	0
Freight to Mangalore	150	0	0
Ditto to Tuddry	150	0	0
Fixing the Buoys...	650	0	0
Contingencies	118	9	0
Total...	2,550	0	0

This paragraph furnishes a reply to Order No. 3,631 of 6th August just received.

4. Having already in letter No. 568 of 21st December 1859, paragraph 3, recommended that the screw moorings at Tuddry should be put down at Beitkál, I am pleased to find that Commander Fraser "quite concurs in my opinion that they would be of great use in Beitkál

" Bay, should it become a commercial port." His belief is that " under similar conditions (as " for the Tuddry Beacon's) they could be placed in Beitkál Bay at an expense of from " Rupees 1,200 to Rupees 1,500." My estimate forwarded with the letter above quoted amounted to Rupees 1,300. This would be lessened by the adaptation of the same appliances of all sorts for driving in the screw piles of the Pier proposed in my letters No. 5 of 11th May 1861, and No. 34 of 5th June, to the speedy and efficient execution of which work, if sanctioned, no doubt the hearty assistance of Commander Fraser, his Officers and crew, would greatly conduce.

5. As bearing on the latter of the topics discussed in this letter, but still more on account of its general interest, I append copy of an extract from one of Commander Fraser's communications to my address.

EXTRACT.

Paragraph 4. " It may not be out of place to inform you, that in my report to the Commander-in-Chief of the Indian Navy, I have recorded my opinion that this Bay is unsafe " for vessels to attempt to run into, in the *bad* part of the south-west monsoon, in consequence " of very heavy breakers, which extend from the west point of Carwar Head to the mouth of " the river, and also throughout the Bay, excepting (with the wind *south* of west) close under " the head. What shelter (if any) the Bay affords, should the wind haul to north of west, I " have had no fair opportunity of judging."

5. Further, Beitkál Cove has either " *silted up* some four feet, since Lieutenant Taylor " surveyed the Bay, or an unusually low-tide has been experienced since my arrival here, as " I have had four feet less water in the Cove, and two feet less in the Bay, than shown by him. " Further observations are necessary to determine to what cause this difference is owing."

6. " Under these circumstances, it will be for Government to decide whether the neces- " sary protective works, to ensure the safety of vessels in *all weathers,* shall be constructed ; in " which event alone the moorings would prove useful."

(True Extract.)

(Signed) G. W. WALKER, Captain,
District Engineer.

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1. Submitted to Government with reference to their Proceedings No. 1,437, dated 2nd August 1861.

2. It will be observed that on the opinion of the District Engineer and of Commander Fraser of H. M.'s Sloop " Falkland," the Buoys at Tuddry will be of great use for the Harbour in Beitkál Bay, and that Commander Fraser offers to assist in laying them down there.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 162. ORDER THEREON, 17th September 1861, No. 1,737.

1. The Buoys referred to in paragraph 2 of the Chief Engineer's Endorsement may be reserved for the Harbour in Beitkál Bay, where it is observed the local Officers consider they will be of great use.

2. As to paragraph 3 of the District Engineer's letter now submitted, the Chief Engineer will be requested to report the correct amount requiring sanction under the Order of 3rd July* last, on account of the Beacon Buoys for the Tuddry Harbour.

* No 1,230.

(Signed) J. D. SIM,
Secretary to Government.

No. 163. Read the following Proceedings of the Madras Government in the Marine Department, dated 12th September 1861, No. 295:—

Sanctioning the excess cost of constructing the Teak Wood Frame for the Diving Bell. (Vide Marine Proceedings, 12th September 1861, Nos. 35-36.)

No. 164. ORDER THEREON, 17th September 1861, No. 1,738.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 165. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 7th September 1861, No. 4,693:—

SIR,

1. With reference to the Proceedings of the 13th August, No. 1,546, I have the honor to forward a letter with enclosures from the District Engineer Godavery, addressed by him to the Collector, relative to the breaches made in the river embankment during the late flood.

1 Letter from District Engineer Godavery, No. 324, dated 26th August 1861, with seven enclosures.

2. Major Stoddard states that in one instance he, in company with others, was witness from the deck of the steamer to the embankment being deliberately cut by the villagers, but not being able to get near enough to apprehend them, they escaped.

3. On subsequently inspecting the whole line of embankment, he was convinced that the greater number of the breaches between Vizaiswaram and Polaveram (the village at the foot of the hills) were similarly made by the villagers for the purpose of benefiting their lands.

4. In the central Delta, especially where villages are situated outside it, the embankment was cut through on the strange supposition, that they would be relieved thereby. At the village of Rámáchendrapúram this was especially evident, as there the embankment happened to be particularly strong, and the District Engineer is strengthened in his conviction by the fact of a rumor having got abroad, that he himself had ordered the breaches to be made in the event of another flood recurring.

5. The District Engineer properly observes that if all these breaches are to be repaired at the cost of the State, it will only be a premium for their recurrence, and he therefore suggests, that the river and canal banks be placed under the guardianship of the heads of villages, who should be held strictly responsible for their preservation on the penalty of dismissal; and he further suggests that in all the present instances, where the breaches were evidently the work of the villagers, the cost of their repair should be recovered from the village communities. This appears to me however, but a small punishment in return for the serious injuries inflicted on those villages whose lands have suffered from such wanton proceedings, and I would recommend that, whenever practicable, the delinquents should be punished with the utmost severity. It is just an instance where the strong arm of the law is requisite for the protection of not only property but life; and where there is so much dependent on the preservation of the embankment as in the Godavery and Kistna Deltas, I would suggest, that during the season of the freshes, and on the indication of an unusual flood, strong parties of the Police should patrol along the river embankments with orders to prevent such reckless acts as have been lately committed.

No. 166. ORDER THEREON, 17th September 1861, No. 1,739.

1. This letter will be communicated to the Collector of the Godavery District in continuation of Government Order dated 13th August 1861, No. 1,546. Mr. Purvis will use every effort to discover the delinquents, and will visit offences of this character with exemplary punishment. Material injury to public works can rarely be perpetrated without the knowledge of some of the village officers, and even when it is, the delinquents are in the majority of instances well known in their villages. The Collector will, therefore, hold the village officers answerable and notification to this effect should be published in the District Gazette, and made generally known throughout the District.

2. The expense of repairing the bunds should be recovered, so far as may be practicable, from the villagers.

(Signed) J. D. SIM,
Secretary to Government.

No. 167. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th August 1861, No. 4,457 :—

SIR,

1. In obedience to the Orders of Government in the Public Works Department No. 615, dated 26th March 1861, communicating a letter from the Secretary to the Government of India, calling for certain particulars regarding the cost of the several Hill Stations and Sanataria within the Madras Presidency, and desiring my opinion as to the best means of making such stations self-supporting; I do myself the honor to submit the accompanying tabular statement which gives, as far as possible, the information required, together with the following remarks.

1 Memorandum regarding the Hill Stations and Sanataria in the Madras Presidency.

2. The only Hill Stations or Sanataria in this Presidency, on which there has been expenditure of Government money, are Rámandrúg in the Bellary District, and Ootacamund, Kunúr, Wellington and Kottagherry on the Neilgherries.

3. The Rámandrúg is a Hill Station about a mile square, and distant from Bellary 34 miles, to which the European residents resort chiefly in the hot weather, and where a Detachment of European Troops is located. The total cost of all Military buildings at Rámandrúg is Rupees 62,730, while the other non-Military Government buildings have cost less than Rupees 3,000. The sum of Rupees 180 is allowed by Government for the maintenance of the station roads, and Rupees 23,578 have been expended on the construction of a metalled road from Bellary to Rámandrúg, being at the rate of Rupees 578 per mile. The annual maintenance for the past six years has been Rupees 780, but this is insufficient and a further sum will probably hereafter have to be granted.

4. Rámandrúg is in no way self-supporting, nor do I know of any means whereby it could be made so. The number of European residents, other than Military, being very few indeed, and they not stationary. The land I believe belongs to a neighbouring Zamíndár. The following is an Extract from the District Engineer's letter* upon the subject :—" I regret to say I am unable to suggest any means " for making the Station self-supporting; all people who now " resort to it are paying an Income tax, a portion of which is avowedly levied for Public Works. " The percentage of deaths to recoveries is so small on the Drúg out of the number of invalids " sent here that the saving effected in this way must have long ago repaid the small outlay which " has been made on the station. During the hot weather it appears some 80 men have been sent " to the Drúg and have recovered their health so far as to be able to rejoin their Regiments fit " for duty. Had these men been kept in the plains during the same season the probability is they " would have died or had to be invalided. In either case the cost of first bringing them out

* No. 451, dated 24th April 1861.

" and then finding others to fill up their vacancies would not have been less than Rupees 2,500 " per head, so that the saving to the Government has been Rupees 2,00,000 a year on an " expenditure of less than a lac. In the last two years only one death per annum, as far as I " am aware, has occurred, and in these cases recovery was hopeless before they came up the Hills."

5. Wellington is entirely a Military station, and must of necessity be supported at the expense of Government.

6. The experimental station at Harris' Valley in the Vizagapatam District was not found to answer, and has been abandoned.

7. The Hill Stations of Ootacamund, Kúnúr and Kottagherry, on the Neilgherries, have no accommodation for Troops, though they are resorted to frequently by sick Officers and their families, as well as by Civilians. At Ootacamund subscriptions are collected monthly for the poor, and measures are in progress for obtaining funds to build an Hospital. A small sum is also collected from the residents for Sanitary and Municipal purposes. To cover the expense of constructing and repairing the roads leading to the station there are no funds at present, and to raise them it would be necessary to put a Toll on the Gháts, and to impose a Horse and Wheel Tax on the parties resorting to the station. A tax might be levied on the lands taken up for Coffee and other produce by settlers on the Hills, as great advantage accrues to them by the approaches to the Hills being kept in good order. Such collections, however, should be scrupulously allotted to, and spent upon the roads leading to the estates from whence they are derived. A House Tax might also be introduced at the above three stations, to cover in some measure the charges for any local establishments maintained at the cost of the State for Police and Municipal purposes.

8. I have not included Yerkád on the Shevaroy Hills in the Salem District in the statement now furnished, as there are no Government establishments kept up on those Hills, and no expenditure incurred ; except in making and repairing the approaches thereto as feeders to the South West Railway, the annual maintenance allowance being at present Rupees 420 for the Yerkád and Salem Ghát, and Rupees 950 for Mulliapúram Railway Station to the foot of the Hills.

No. 168. ORDER THEREON, 17th September 1861, No. 1,740.

Referred to the Public Department, with reference to the Order in that Department, dated 21st March 1861, No. 415.

(Signed) J. D. SIM,
Secretary to Government.

No. 169. Read the following Proceedings of the Board of Revenue, dated 18th June 1861, No. 3,179 :—

Read the following letter from W. M. CADELL, Esq., Collector of Tanjore, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated 1st May 1861, No. 87.

SIR,

1. With reference to the orders of Government, under date the 28th February last, No. 403, communicated with the Board's Proceedings of the 2nd March, No. 1,205, I have the honor to submit the further explanation therein called for, relative to the breaches of the Vadiyar and Mulliyar rivers.

2. With regard to the inquiry made by Government in paragraph 3, as to why the village officers should not be dismissed in the case of the cut made on the south bank of the Vadiyar, I beg to state that the locality where the same took place belongs to a Vattam comprising four villages, and the establishment of which is noted in the margin. This comprises, as will be seen, a Maniagar, three village Munsifs and three Talaiaris. The village Munsifs are purely judicial officers, and receive no emolument whatsoever, nor have they any revenue duties assigned to them. As regards the Talaiars, our claim on their services has scarcely ever been enforced in practice, and has now been definitively foregone under the Orders of Government, dated 19th March 1860, No. 335.* Thus the whole of the village Revenue Establishment attached to the Vattam in question, and which comprises four villages, consists of but one Maniagar on a salary of 5 Rupees per mensem. This last-mentioned officer, I would take leave to observe, is, in this part of the District and which was formerly included in Danish settlement of Tranquebar, nothing more or less than the village Accountant or Karnam, there being no Pattamaniagars at all in these villages.

1. Erukattancheri	1 Maniagar. 1 Village Munsif. 2 Talaiars.
2. Kottupalaiam	1 Village Munsif.
3. Salai Olugamangalam	Do.
4. Sattangudi	1 Talaiar.

* Judicial Department.

3. Under these circumstances, and adverting also to the fact that, in this instance, the cut was made, not by the Mirásidárs of any of the four villages belonging to the range of the Maniagar, but by those of the villages situated some distance to the westward, I beg respectfully to submit that it would not be just to punish him with dismissal from duty. I would only take leave here to add that none of the four villages abovementioned was from its situation, likely to be in any way benefited by the cutting open of the bank, but, on the contrary, all the four were more or less liable to be injuriously affected by it.

4. As regards the Mulliyar breach alluded to in paragraph 7 of the orders of Government, I beg to state, that the fact of a cut having been made as alleged, was never either admitted or attempted to be justified by the Mirásidárs, and that the statement made by the District Engineer, in paragraph 8 of his letter to the Deputy Chief Engineer, dated 7th November last, No. 231, that they made such admission, &c., apparently proceeded from a misconstruction put by that Officer on a passage from a Yadast written by Overseer Kuppusami Raju. That Yadast is now before me, and all that is stated, is simply that he conjectured this to be the case from what "he heard at the spot," that the Mirásidárs made the cut because the proper head of their channel was on too high a level to draw its supply from the river. That what "he heard at the spot" did not mean what the parties concerned stated to him, is clear from the passage which next follows in the very same report of the Sub-Overseer, viz., that he could not discover who were the parties that made the cut.

5. In reply to a reference since made by me on the subject, Captain Oakes has informed me that, on a further reference, the Overseer has stated that *no attempt was* made by the Mirásidárs concerned, to conceal the fact of their having made a cut. I beg, however, to submit that this is in direct variance with his former report, and in which the Overseer stated that he could not discover who were the parties who made the cut.

6. I would take leave further to add that no traces whatever have been found of any excavation having been made from the breach to the channel or to the cultivation direct, and as no water could have been conveyed without such excavation, it is, I think, demonstrated that no supply whatever was drawn or intended to be drawn from the breach. Such being the case, it is I submit, difficult to conceive what occasion there could have been for the Mirásidárs admitting that they made the alleged cut for the purpose of irrigation, while there was no necessity therefor, and while, in point of fact, no supply is shown to have been obtained.

7. With reference to the remark contained in the same paragraph of the Government Order, viz., "how the Tahsildár could tell after the breach was made that there was no previous "cut at the spot, is not explained," I beg respectfully to state that, from his long and extensive experience in that Táluq, he was well acquainted with the locality where the bank was exposed

to a set of the stream, and therefore as a place where a breach was not unlikely to occur; with this knowledge therefore, and in the absence of any possible motive on the part of the Mirásidárs for making a cut, he very naturally concluded that no cut was made, and that the breach was accidental.

8. I trust this explanation may be deemed satisfactory.

—o—

1. Submitted for the information of Government, with reference to their Order, dated 28th February 1861, No. 403, Public Works Department.

In Cons. 1st March 1861, No. 1,311.

2. In paragraph 3 of the Order above quoted, the Government wished to know why the Monigars, Curnums, &c., of certain villages whose Mirásidárs were supposed to be concerned in in the breach made in the south bank of the Vadiyar channel should not be dismissed; and in paragraph 7, they called for further information regarding the breach cused in the Mulliyar channel. On both points explanation is afforded in the foregoing letter.

(A true Copy and Extract.)

(Signed) W. HUDLESTON, *Secretary.*

No. 170. ORDER THEREON, 17th September 1861, No. 1,741.

Ordered to be recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 171. Read the following Endorsement of the Chief Engineer, dated Chepauk, 13th September 1861, No. 4,877:—

Read the following letter from Captain F. T. HAIG, District Engineer Upper Godavery, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer Northern Circle, dated Allbâcâ, 16th August 1861, No. 68.

SIR,

1. I have the honor to request that four additional Dressers may be attached to this District for the present year. The working parties which will be employed at the 2nd and 3rd Barriers as well as at other points for the improvement of the river bed will render this a necessary measure of precaution.

2. There is a Civil Surgeon at Sironcha, the head-quarters of the Deputy Commissioner of the newly transferred Táluqs in the north bank, but he cannot be expected to render medical aid to parties of Natives and Europeans from 40 to 60 miles distant; and though the Medical Establishment at Dúmagudiam may be sufficient for the wants both of that place and the working parties along the line of tram-road between it and Baddrachellam, it could not administer aid to the sick at Rúdramkotta, Koyidtha and Mungapett, at all which points work will probably be in progress.

3. I would propose to place all the Dressers under the supervision of the Medical Officer at Dúmagudiam, who would also have charge of the general store of medicines and issue them to his subordinates as required.

4. I would further request that the accompanying indent for medicines, drawn up by Assistant Surgeon Houston, may be passed, and the medicines supplied by the Medical Storekeeper and despatched to Cocanada as early as possible.

Submitted to Government with a recommendation that Captain Haig's application for four Dressers and his Indent for medicines, may be sanctioned. It is observed that the localities where the tram-roads will be constructed are nearly 100 miles apart, while the roads themselves are respectively 16, 16 and 26 miles in length. Of the other place mentioned in Captain Haig's letter Rúdramkotta is 45 miles and Koyidtha and Mungapett 60 miles distant from Dúmagudiam.

1 Original letter with two enclosures.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 172. From Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 14th September 1861, No. 4,932 :—

SIR,

In continuation of my Endorsement No. 4,877, dated 13th instant, submitting a letter from the District Engineer Upper Godavery, applying for medical aid and medicines for the workmen employed on the river works, I have the honor to forward the accompanying Telegram received this day from Captain Haig, soliciting that two of the Dressers applied for may be directed to proceed forthwith, as their services are very much required at the 2nd and 3rd Barriers, and to request that early orders may be passed thereon with a view to the parties proceeding by the first opportunity by sea to Cocanada.

No. 173. ORDER THEREON, 17th September 1861, No. 1,742.

These papers with their enclosures will be referred to the Principal Inspector General Medical Department, in view to his reporting whether arrangements can be made for complying with Captain Haig's application for four additional Dressers to be attached to the Upper Godavery works for the present year, and for a supply of medicines, &c., as specified in the Indents. If the Dressers are available, the Principal Inspector General is authorized to comply at once with the request made in the second of the papers above recorded.

(Signed) J. D. SIM,
Secretary to Government.

No. 174. Read the following Proceedings of the Madras Government in the Military Department, dated 2nd September 1861, No. 3,081 :—

Referring a letter from the Deputy Quarter Master General of the Army on the subject of the serious falling off in the water supply in the Cantonment of Bellary. } (Vide Military Proceedings, 2nd September 1861, Nos. 9 @ 12.)

No. 175. ORDER THEREON, 17th September 1861, No. 1,743.

1. The Chief Engineer will call upon the District Engineer to report what can be done towards supplying the Town and Cantonment of Bellary with a sufficiency of water.

2. The Collector and District Engineer will attend any Board which may be convened by the Major General Commanding, for the consideration of this subject.

(Signed) J. D. SIM,
Secretary to Government.

No. 176. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th August 1861, No. 4,465:—

SIR,

2 Letters from Civil Auditor, Nos. 187 and 208, dated 6th and 17th August 1861.

1. With reference to their Proceedings, No. 1,428, dated 1st August 1861, I have the honor to report for the information of Government, that the bills referred to in Mr. Mechanical Engineer Clements' Petition dated 20th July 1861, No. 142, have been disposed of as follows:—

	RS.	A.	P.	
Additional allowance, house-rent and compensation for rations *for 14 days* in January 1861......	37	12	8	Passed by the Civil Auditor for Rupees 38-15-11, and forwarded to the Officer superintending operations at Paumben.
Travelling expenses in January 1861.	88	14	0	This bill was received in the Central Office on the 22nd February and was twice returned to the District Engineer Madura, in order that three separate bills for mileage allowance from Madras to Negapatam; for passage money from Negapatam to Paumben, and for compensation in lieu of rations might be submitted. The three bills prepared in accordance with the instructions of this Office were received on the 22nd July 1861, and were forwarded on the 14th instant to the Civil Auditor who has passed the 1st and 3rd. The 2nd has not yet been returned to the Central Office.
Extra steam allowance for April 1861	5	0	0	This bill was received in the Central Office on the 26th June and after some correspondence with the Civil Auditor, which is now before Government, was submitted for their sanction in my letter No. 3,643, dated 17th instant.
Extra salary and Extra steam allowance for May 1861..............	32	14	11	The bill for the extra salary amounting to Rupees 19-15-6 has been passed by the Civil Auditor and forwarded to the Officer at Paumben. That for extra steam allowance Rupees 12-15-5 has been retrenched.
Salary for June 1861..................	83	5	4	These bills have been disposed of by the Civil Auditor in communication with the local Officers.
Additional allowance for do.	37	8	0	
Rations for do.	22	9	6	
Extra pay for do.	22	3	4	
Extra steam allowance for June 1861,	10	0	0	This bill is reported not to have been received by the Civil Auditor.

2. It will be observed from the above, that there has been no unnecessary delay in the disposal of Mr. Clements' bills for extra steam allowance for April 1861, and that the delay in the disposal of his bill for travelling expenses in January last is in a great measure owing to the necessity which existed for returning the same for revision on two different occasions. At the same time it must be admitted that the bill in question was not disposed of in this Office as expeditiously as it might have been.

3. Mr. Clements being a Mechanical Engineer of the 3rd Class receives pay and allowances as follows:—

	RS.	A.	P.
Salary... ... ..., ...	83	5	4
House rent	25	0	0
Rations...	22	9	6
Additional allowance for work performed during ordinary factory hours when the steam is up, at $1\frac{1}{4}$ Rupee per day...	37	8	0
Total......	168	6	10

4. In addition to the above, Mr. Clements is entitled, under the Orders of Government No. 1,659, dated 8th July 1859, to extra pay and extra steam allowance when required to work beyond ordinary factory hours.

5. With regard to Mr. Clements' prayer for an increase of salary, I have the honor to state that he will not be entitled to the next higher* rate of pay provided for in his Covenant until May 1862,† when he will have served three years in India.

* £125 per annum.

† See letter from Secretary to Government, Public Works Department, to Acting Secretary to Govt. of Bombay, No. 2,018, dated 28th September 1860.

6. In conclusion, I would beg to report for the informatian of Government that agreeably to Mr. Clements' request, I addressed the Commander of Her Majesty's steamer "Dalhousie" on the 4th December last, with a view to his examination in order to test his qualifications for promotion to a higher grade. In pursuance of my letter, the necessary arrangements were made by Commander Hopkins, but on the day (11th December) appointed for his examination, Mr. Clements urged that he was unprepared for it and requested that it might be postponed.

No. 177. ORDER THEREON, 18th September 1861, No. 1,744.

The Chief Engineer will instruct the District Engineer of Madura to communicate to Mr. Clements the purport of the foregoing letter, in reply to the Petition addressed by him to Government under date 20th July last, No. 142.

(Signed) J. D. SIM,
Secretary to Government.

No. 178. Read the following letter from Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 2nd September 1861, No. 23 :—

SIR,

1. I have the honor to forward the accompanying plans and schedules received* from the Agent for land situated in the Territory of His Highness the Nizam.

* Letter No. 347 of the 7th August 1861, herein enclosed.

2. The Chief Engineer states that this land will be required for the Company's Main Channel at about the 35th mile from Sunkasala, and that the application has preceded the submission of the estimate which is nearly complete, in order to allow of the sanction being received for the transfer by the time the estimate has received the sanction of Government.

3. The plans and schedules have been duly checked in my Office and found to be correct. The total area of the ground asked for is 493·34 acres, of which 371·64 is under Class A and 121·7 is under Class B.

4. I beg therefore that the necessary reference may be made to the Resident at Hyderabad for the transfer of the land in question.

From F. AGNEW, Esq., Agent for Madras Irrigation and Canal Company, to Captain F. H. RUNDALL, Consulting Engineer for Madras Irrigation and Canal Company, dated Madras, 7th August 1861, No. 347.

SIR,

I have the honor to forward copy of a letter† from the Chief Engineer, enclosing a tracing‡ of land in the Territory of the Nizam of Hyderabad together with the schedules thereto belonging in duplicate.

† No. 702.
‡ No. 26.

From H. C. COTTON, Esq., Chief Engineer, to F. AGNEW, Esq., Agent for Madras Irrigation and Canal Company, dated Kurnool, 29th July 1861, No. 702.

DEAR SIR,

Accompanying I have the pleasure to forward a tracing of land in two villages in the Territory of the Nizam of Hyderabad, which will be required for the Main Channel at about the 35th mile from Sunkasala. I send this plan with schedules in the same form as is required for land in the British Territory, and I send it in advance of the other land plans as more time may possibly be required to obtain the transfer of the land. The latter will be forwarded in a few days with the estimate for the Channel to be laid before the Government.

(True Copy.)

(Signed) F. AGNEW,
Agent Madras Irrigation and Canal Company.

MADRAS IRRIGATION AND CANAL COMPANY.

LAND PLAN No. 26.

Schedule of land required in Village of Reelumpaud, Nizam's Territories.

Reference on Plan.	Purpose for which required.	Class A. Colored pink.	Class B. Colored yellow.	Class C. Colored purple.	Class D. Colored green.
		Acres.	Acres.		
1	Canal and banks including diversion of roads.	271·10	......	......	......
2	Extra excavation for makng embankment....	......	52·9	......	......
	Total......	271·10	52·9	......	......

(Signed) R. SMITH,
Executive Engineer, Hindri Division.

(Signed) H. C. COTTON,
Chief Engineer.

Jolapúram, Executive Engineer's Office, 21st August 1861.

(Signed) F. H. RUNDALL, Captain,
Consulting Engr. for I. & C. Compy.

MADRAS IRRIGATION AND CANAL COMPANY.

LAND PLAN No. 26.

Schedule of land required in the Village of Sultánpúr, Nizam's Territories.

Reference on Plan.	Purpose for which required.	Class A. Colored pink.	Class B. Colored yellow.	Class C. Colored purple.	Class D. Colored green.
		Acres.	Acres.		
3	Canal and banks including diversion of road.	100·54	......	......	......
4	Extra excavation for making embankment...	......	68·8	......	......
	Total......	100·54	68·8	......	......

(Signed) R. SMITH,
Executive Engineer, Hindri Division.

(Signed) H. C. COTTON,
Chief Engineer.

Jolapúram, Hindri Division, Executive Engineer's Office, 27th July 1861.

(Signed) F. H. RUNDALL, Captain,
Consulting Engr. for I. & C. Compy.

Ordered that the following letter be despatched.

No. 179. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to Lieutenant-Colonel CUTHBERT DAVIDSON, C. B., Resident at Hyderabad, dated 18th September 1861, No. 1,745.

SIR,

1. I have the honor under the orders of the Governor in Council to transmit to you herewith copy of a letter* from the Consulting Engineer for the Madras Irrigation and Canal Company, together with the plan and schedules therein referred to, on the subject of certain land situated within the limits of the Territory of His Highness the Nizam required for the works of the Company, and to request that you will adopt measures for the transfer of the land in question to the Company through the Collector of Kurnool. The total extent applied for is acres 493·34.

* Dated 2nd September 1861, No. 23.

2. I am also to inform you that your letter dated 5th instant, No. 1,367, has been referred to Captain Rundall for explanation, and that the matter therein alluded to will form the subject of a separate communication.

3. Enclosed I forward for your information a copy of the Rules for regulating the terms on which land is to be provided by Government for the purposes of the Irrigation and Canal Company.

No. 180. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 4th September 1861, No. 4,590:—

SIR,

1 Letter from the District Engineer Bellary, No. 131, dated 11th July 1861.
1 Do. No. 216, dated 20th August 1861.

I have the honor to forward an application received from the District Engineer Bellary requesting an annual grant of Rupees 1,200 for twelve miles of Trunk Road No. 12, viz., from Coodair to Anantapúr, lately constructed out of the local funds of the District. The traffic on the road in question the District Engineer states to be heavy, being ordinarily about 100 and in the height of the season 200 bandies per day, I therefore beg to recommend that the maintenance allowance of Rupees 1,200, being at the rate of Rupees 100 per mile, may be sanctioned, and permission granted for the entry of the same in the Budget of 1862-63. This will be in addition to the Rupees 2,075 sanctioned for the maintenance of the portion of the same road between Ooroovacondah and Coodair, under dates 30th April 1855, No. 172, and 10th January 1857, No. 65, entered in Budget Statement No. 3 of the current year.

No. 181. ORDER THEREON, 18th September 1861, No. 1,746.

The proposed maintenance allowance of Rupees (1,200) one thousand two hundred, for the twelve miles of Trunk Road No. 12 in the Bellary District reported to have been lately constructed, viz., from Coodair to Anantapúr, is sanctioned, and permission is granted for its being entered in the Budget for 1862-63.

(Signed) J. D. SIM,
Secretary to Government.

No. 182. Read the following letter from R. COLE, Esq., M. D., Principal Inspector General, Medical Department, Fort Saint George, to T. PYCROFT, Esq., Chief Secretary to Government, Public Works Department, dated Fort Saint George, 5th September 1861, No. 135:—

SIR,

* Extract Minutes of Consultation Public Department, No. 936, of the 20th April 1859.

The Chief Engineer having brought to notice the irregular attendance of Mr. Petman, a private Medical Practitioner, to whom Government sanctioned* an allowance of Rupees 100 per month, on account of the work-people at the Tambracherry Ghát, and the advisableness of appointing an Apothecary for this duty, I have the honor to acquaint you, for the information of Government, that an Assistant Apothecary has been recently nominated to afford medical aid to the work-people at the Pass, one of this grade being now available, and that the services of Mr. Petman will be discontinued from the date of his relief by the Assistant Apothecary.

No. 183. ORDER THEREON, 18th September 1861, No. 1,747.

Communicated to the Chief Engineer for information.

(Signed) J. D. SIM,
Secretary to Government.

No. 184. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 7th September 1861, No. 4,738:—

SIR,

1. Adverting to my letter No. 2,532, dated 11th July last, I have the honor to submit an application received from the District Engineer Presidency for gratuity claimed by the relatives of the late Picottah man, Madurai, attached to the Seven Wells water works.

1 Letter from the District Engineer Presidency, No. 636, dated 3rd August 1861, with three letters.
1 Do. No. 755, dated 21st August 1861.

2. The District Engineer forwards three statements on behalf of the 1st widow and two daughters of the 2nd widow, and avers that he does not know who is the party that should receive the gratuity.

3. He should, I apprehend, have entertained no doubt on this score as in Chapter X, Clause 2, paragraph 7, of the new Code, it is clearly laid down that where there is no son, as in the present instance, the widow, and if there are two widows I suppose the first before the second, should receive the gratuity. I therefore beg to recommend that a sum of Rupees 57, equivalent to six months' wages, may be sanctioned for disbursement to the 1st widow.

No. 185. ORDER THEREON, 18th September 1861, No. 1,748.

1. The Government sanction the payment of the gratuity, amounting to Rupees (57) fifty-seven, in equal portions to the widows of the deceased Picottah man Madurai.

2. The Chief Engineer has not stated from what funds the charge is to be met, but the Government presume that it is to be paid out of the general funds at the disposal of the District Engineer.

(Signed) J. D. SIM,
Secretary to Government.

No. 186. Read the following Proceedings of the Madras Government in the Educational Department, dated 14th September 1861, No. 9:—

Read the following letter from A. J. ARBUTHNOT, Esq., Director of Public Instruction, to T. PYCROFT, Esq., Chief Secretary to Government, Fort Saint George, dated Kunúr, 29th August 1861, No. 1,599.

SIR,

1. I have the honor to request that the Governor in Council will be pleased to sanction the disbursement of the sum of Rupees 70, the cost of erecting a belfry on the terrace of the Medical College, the expenditure being debited to the Educational Building Fund.

2. The charge can be provided for out of the Budget Estimate.

The Government sanction the cost, Rupees (70) seventy, of the work referred to, and direct that it be debited to the Educational Building Fund. The charge can, it is observed, be provided for out of the Budget Estimate.

(True Extract.)

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 187. ORDER THEREON, 18th September 1861, No. 1,749.

Ordered to be communicated to the Chief Engineer for information and guidance.

(Signed) J. D. SIM,
Secretary to Government.

No. 188. Read the following letter from J. J. FRANKLIN, Esq., Chairman Pier Committee, to J. D. SIM, Esq., Secretary to Government, dated Madras, 29th May 1861, No. 14:—

SIR,

1. In continuation of my letter of the 23rd November last, No. 12, I have now the honor to report the result of the Committee's deliberations on the subject of the connection of the Pier with the Sea Custom House, and of the other arrangements proposed for facilitating the landing and shipment of cargo and passengers.

2. It has long been found that the space in the present Sea Custom House is far too confined for the trade of the port, and consequent on this during a considerable portion of the year tents have to be pitched on the beach for the reception of cargo which cannot find room in the Custom House yard. Sir Charles Trevelyan on his visit to the Custom House in May 1860, reference to which is made in the letter above quoted, noticed this immediately and suggested that some such arrangement as that now submitted should be made.

3. Bearing this in view the Committee have provided in their recommendation for two large warehouses, 200 feet long by 40 feet broad, to be built on the eastern side of road, connected with the Pier by two lines of rail and surrounded by iron palings. These buildings are to be exclusively devoted to export cargo, which will be brought into the enclosure on carts, and having been transferred from them to the Pier waggons, will be carried by the latter to the Pier end.

4. The imports, on the other hand, will be carried into the present Custom House yard, where arrangements are to made by a system of sunken rails to convey them at once to the sheds which they are to occupy.

5. By these means the export and import trades will not interfere with each other, a matter of considerable consequence when the present trade of Madras is taken into consideration. During the past official year the exports were in value 95,24,625 Rupees, and the imports 174,33,041 Rupees; and as the greater portion of this will pass over the Pier when open to the public, a measure of this sort seems to the Committee absolutely necessary to prevent confusion.

6. The Committee have been in frequent communication with the Chief Engineer, regarding the works required to give effect to this arrangement and to render the Pier as much as possible conducive to the public convenience, many alterations had to be made in the original plans to meet suggestions which were offered from time to time as different points came under consideration, and this must account for the apparently tardy submission of their report. Colonel Horsley has now furnished them with the accompanying plans and estimates embracing all they consider to be necessary to render the connection with the Sea Custom House perfect, and to afford that space for the storing of cargo which is now so deficient. They therefore beg to recommend them for the sanction of Government, and solicit permission for the masonry work to be proceeded with at once in substitution of the arrangement sanctioned in Proceedings of Government of 26th March 1860, No. 623, at a cost of Rupees 7,400, materials for which are now in preparation.

7. The specification which accompanies the estimate clearly shows the nature of each portion of the work the Committee recommend for sanction. They need not, therefore, recapitulate them here, but some explanation is required to show why the cost, Rupees 1,62,000, is so much in excess of the sum for which the Pier Contractor's Agent offered to undertake the work, namely, £13,140. Many additions were subsequently found to be necessary, such as the following, and taking these into account the estimates are much under the Tender referred to:—

Rupees	1,000	for enlarging the passage into the Custom House to admit the waggons.
,,	18,980	for railings and gates.
,,	2,400	for four Porters' lodges.
,,	1,200	for two travelling iron cranes to lift 5 tons.
,,	2,000	for one powerful crab with shears to lift 20 tons.
,,	1,440	for twelve cast-iron lamp posts complete.
,,	4,000	for two heavy timber trucks to carry 20 tons each.
,,	16,000	for 25 open and 5 covered wooden waggons to carry 5 tons each.
Rupees	47,020	

8. The whole plant of the Pier, irrespective of that already stipulated for in the contract is thus provided for, and the estimates come before Government in a more complete shape than would have been the case if submitted earlier.

9. The Draft Pier Act and Tariff of Tolls to be levied are in course of preparation and will be forwarded at an early date, as will also be a scale of the establishment for conducting the business of the Pier.

No. 189. ORDER THEREON, 18th September 1861, No. 1,750.

1. The Chairman of the Pier Committee submits plans and estimates for completing the communication between the Sea Customs House and the Pier, and for effecting certain improvements with a view to facilitate the landing and shipment of cargo.

2. Among the items is one of Rupees 45,900 for additional warehouses. The existing Customs House seems to have extensive accommodation, and the Government request the Board to report without delay whether with proper arrangements for levying duty on goods as landed, this will not suffice.

3. The cost of the new buildings proposed represents an annual charge for interest on capital, repairs, &c., at least of Rupees 4,590, and it would be better to employ a few extra Customs Officers, if necessary, than incur this expense, particularly as it would be more convenient to the Mercantile community as well as economical to Government to have goods promptly taxed and cleared. The Customs Establishment however is large, and even this addition may probably be obviated by improvements in the conduct of business. The Board will state in round numbers the Import and Export Tonnage of Madras.

(This is 10 per cent. on the outlay.)

4. As regards the other works the Governor in Council questions the necessity and stability of the proposed retaining wall. The porters' lodges, railings, and gate-ways, are not required, and as in the present state of the finances the Government must limit their expenditure to such works as are indispensable, they can only sanction so much of the Committee's projects as is needed for securely but economically connecting the Pier with the Customs House, and with such work they may at once proceed. The Committee will state what funds they will require in the current year, and furnish a detailed list of the articles required from England after ascertaining how far their request can be met from the Government Stores.

(Signed) J. D. SIM,
Secretary to Government.

1950 *Proceedings of the Madras Government, Public Works Department,* 19*th September* 1861.

No. 190. Read the following Proceedings of the Board of Revenue, dated 9th August 1861, No. 4,295 :—

Read again letter from the Collector of Madura, dated June 6th 1861, No. 149.

(In Consultations, 10th June 1861, No. 3,536.)

Read also letter from the same Officer, dated July 18th 1861, No. 179, forwarding a Report from the District Engineer.

(In Consultations, 22nd July 1861, No. 4,537.)

Read also letter from the Chief Engineer, D. P. W., dated July 27th 1861, No. 3,195.

(In Consultations, 29th July 1861, No. 4,714.)

1. Resolved that the above letters be submitted for the consideration and orders of Government, with reference to paragraph 3 of their Order, under date October 25th 1860, No. 2,196, Department Public Works.

In Consultations, 26th October 1860, No. 5,461.

2. The correspondence noted above refers to the levy of tolls in the Madura District, and the Collector is of opinion that it will not be advisable to levy such an impost at any place except on the Andiputty Pass, which forms the eastern outlet of the Cumbum Valley.

3. The inhabitants of the Valley benefit largely by this Pass having been opened, a work which was completed at a very considerable cost to Government and to which they have as yet contributed nothing.

4. It is proposed to levy a small toll of one Anna per bandy, and two Pice per loaded bullock, but the Board concur with the Chief Engineer in considering that the amount of toll suggested by the Collector is very moderate, and they would propose a table of rates as per margin, which they think will not prove too heavy for general adoption at all places where it is thought desirable to levy a toll, and a uniform rate throughout the Presidency should, if possible, be introduced.

	AS.	P.
For one bandy loaded and pair of bullocks	2	0
Do. do. unloaded	1	0
Carriages of all kinds with horses or bullocks	2	0
Palankeens, Mancheels, with set of bearers	2	0
A single horse	1	0
Ponies, bullocks, donkeys, laden	0	6
Camel	2	0
Elephant	4	0

Pack cattle unladen, and all village cattle, sheep, goats and pigs, to be allowed to pass free at certain hours, morning and evening.

5. The Sub-Magistrate of Ooselamputty at the foot of the Pass would afford redress when any complaint of extortion or other misconduct on the part of the toll-takers was brought to his notice, and would receive every evening the amount of the collections at the toll gate, as it is proposed in the first instance to collect the tolls by means of Government servants. At a future date, and after a fair estimate of the probable collections has been obtained, it is proposed to farm it to some respectable individual, as the Board are of opinion that such a system gives less opening for extortion than retaining it in the hands of Government.

6. The salary proposed by the Collector for the toll-taker, appears to the Board to be too low to secure the services of a trustworthy person. An Officer in such a position should not, they think, receive less than Rupees 15 per mensem, and the salary of his assistant should not be less than Rupees 7.

7. The Collector is unable to give a certain estimate of the probable receipts, but should he be correct in supposing that 30 bandies would pass daily through the toll, and if a probable estimate of 40 pack cattle is not beyond the mark, the receipts per mensem would average over Rupees 150, and thus, after paying establishment, would leave a considerable surplus to be laid out in the repairs of the Pass.

8. The Board approve of the Collector's suggestion that the original outlay be advanced from the local fund. Indeed there appears to be no reason why the whole collections from the toll should not be credited to this fund, if due care were taken that a fair proportion of them were expended in keeping the Pass in thorough repair.

9. The Memorandum from the District Engineer forwarded with the Collector's second letter appears to refer to the levy of tolls on Imperial Roads, which, as remarked by the Collector, has already been prohibited by the Supreme Government except in such localities as that under discussion, or at ferries and boat bridges, where a large annual outlay is incurred. As none of the places where the District Engineer suggests the erection of toll bars would be included in this exceptional permission, it is unnecessary to discuss his proposals further.

10. The Chief Engineer is in favor of the Collector's proposal, and the Board also give it their cordial support, and recommend it to the favorable consideration of Government.

(A true Extract.)

(Signed) R. A. DALYELL,
Sub-Secretary.

No. 191. ORDER THEREON, 19th September 1861, No. 1,751.

1. The correspondence submitted with these Proceedings contains suggestions for the levying of tolls on these roads in the Madura District, where the imposition of a tax on passing traffic would seem advisable for the efficient maintenance of the communication, under the views expressed by Government in their Proceedings of the 25th October 1860, No. 2,196.

2. The Collector is of opinion, and the Board of Revenue quite agree with him, that there is but one route in the Madura District on which a toll can properly be levied, viz., the Andiputty Pass, which forms the eastern outlet of the Cumbum Valley; but the District Engineer points to about seven(a) lines of road, on one of which, viz., the southern Trunk Road, he mentions no less than five(b) stations for the erection of toll bars. Both the Collector and the Board are of opinion that these roads fall within the exceptions laid down by the Government of India in their Draft Notification communicated with Captain Dickens' letter of the 3rd May 1860, No. 2,274; and in this view the Government concur, as they perceive that the roads pointed out are of the character of Imperial lines, while two of the stations indicated are permanent bridges on such roads.

(a.) 1. Southern Trunk Road.
2. Pálghát to Madura, viâ Pulny.
3. Do. to Triumungalum, viâ Sholaermdam.
4. Nellakotta to Streevilliputtoo, viâ Ooslumputty.
5. Rámnad to Madura, viâ Purmagoody.
6. Tondy to Madura, viâ Shevagunga.
7. Tondy to Dindigul, viâ Dakotta and Truppatoor.

(b.) 1. Vigay Pavement.
2. Vunjenagarom.
3. Chittumputty.
4. Kiroothoomanuddy bridge.
5. Goundalanuddy bridge.

3. It only remains therefore to consider the proposal in connection with the Andiputty Pass, the levy of a toll at which is also approved by the Chief Engineer,* as "in "every respect a proper locality for the erection "of a toll bar." The Andiputty Pass seems quite to come within the description of places where the levy of tolls is allowable under the Notification of the Government of India, viz., mountain passes where extraordinary natural obstacles have been overcome; and its circumstances fulfil the conditions imposed by this Government in their Proceedings of the 25th October 1860, No. 2,196; for as to the benefit of the work to the persons using the road, it is stated that the inhabitants of the Valley have gained great advantage from the opening of the Pass, as by it they have an outlet for their produce, and as to the locality where the toll is to be collected being within easy reach of means of redress in case of extortion, the Collector states that the Sub-Magistrate of Ooselamputty is but five or six miles distant close under the foot of the Pass, and is thus at hand to punish any case of misconduct on the part of the toll-takers.

* *Vide* letter from Chief Engineer to Board of Revenue, 27th July 1861, No. 3,195.

4. The third point is the amount of the tax. The Collector proposes one Anna on every laden cart, one-third of an Anna on every pack, pony or bullock, and two Pice on every donkey. The Chief Engineer considers these rates very moderate; but the Board think them to be too much so, and in paragraph 4 of their Proceedings propose certain rates ranging from six Pice to four Annas according to the description of conveyance or animal. The rate of toll should, as far as practicable, be regulated by the expense of keeping up the road, taking care of course to keep it within moderate limits; and if possible an uniform rate for each line of road would certainly be most convenient as well as the most advisable, for the rate being but one and well known, the payers would generally resist demands for more. As to the amount of toll to be levied on the Andiputty Pass, the people in the neighbourhood profit largely by the Pass, and can well therefore pay the rates proposed by the Board, which appear to be light. The Government sanction the rates fixed by the Board, and accordingly authorize their adoption.

	A.	P.
A laden pony, bullock, or donkey	0	6
An empty cart or bandy	1	0
A single horse	1	0
A laden cart and pair of bullocks	2	0
A carriage of any kind with horses or bullocks	2	0
A Palankeen or Mancheel with bearers	2	0
A Camel	2	0
An Elephant	4	0

Unladen cattle, village cattle, sheep, goats, pigs, to pass free at certain hours, morning and evening.

5. The Government agree with the Board that the rate of pay proposed by the Collector for the toll-taker and his assistant, viz., 7 and 3½ Rupees, is much too small to secure trustworthy service; and they therefore approve the amount of remuneration recommended by the Board, of 15 Rupees for the toll-taker, and 7 Rupees for his assistant. The toll should be rented out as soon as practical knowledge of the proceeds to be expected is obtained.

6. The tolls levied will be credited to the local funds, and will in the first instance be applied to the maintenance of the Pass itself, and afterwards to the improvement of the approaches as far as the money will go. The Collector will notice the result of this experiment in his annual Local Fund reports.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 192. Read the following Endorsement of the Chief Engineer, dated Chepauk, 27th August 1861, No. 4,362 :—

Read the following letter from Captain E. H. HARINGTON, District Engineer Ganjam, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Russelcondah, 2nd August 1861, No. 124.

SIR,

1. In continuation of my letter No. 99 of 18th ultimo, and with reference to Chief Engineer's Proceedings No. 2,760 of 16th idem, communicating Government Order No. 1,298, 13th idem, I have the honor to report further regarding the roads near Chicacole.

2. The main roads into Chicacole for which maintenance allowance is granted, are the "Pálcondah and Chicacole road" 25 miles at Rupees 100 per mile; "Northern Trunk Road" 39½ miles at Rupees 120; and "Chicacole and Calingapatam road" 16 miles, at Rupees 191.

3. There is also a sum of Rupees 4,926 allowed in the Budget of 1861-62, Item No. 137, for widening and adding metal to certain portions of the Chicacole and Calingapatam road, being the balance of an estimate, Rupees 24,000, sanctioned in Government Order No. 2,410, 23rd December 1856, for the complete construction of this very important line.

4. The money spent from 1st May 1861, to 22nd *July* 1861, from the maintenance allowance on the *three* miles of each of the above roads leading into Chicacole has been :—

	RS.		RS.	
"Chicacole and Pálcondah road"........................	210	or	70	per mile.
"Northern Trunk Road"	296	or	99	,,
"Chicacole and Calingapatam road"	360	or	120	,,

5. Some money has also been spent from the grant adverted to in paragraph 3, in giving extra width and metal to the Chicacole and Calingapatam road near Chicacole, and elsewhere throughout its length. I have not the exact accounts of this expenditure before me, but I know it to be perfectly right, as I have been over the whole road and work with Sub-Engineer Colquhoun on 6th ultimo.

6. The expenditure has *not* been extravagant. On the contrary it has been necessary, and Mr. Colquhoun would have failed in his duty if he had not thereby maintained these important roads in complete efficiency. Each road approaches Chicacole through paddy fields, and were the surface neglected, would soon be impassable. As it is, they are in excellent order. The traffic to and from the Port and Salt pans of Calingapatam is very heavy, and very valuable at times from 500 to 1,000 carts a day, and of course it is heavier near a large town than elsewhere.

7. When the official year, 1st May, begins, it is the duty of those in charge of roads to collect and cart metal to the road-side without delay, otherwise there would be great difficulty in communication with the quarries. When the monsoon sets in, as it does in June or July, the material *must* be ready so that it may be put on during the rains. These arrangements have been made by Sub-Engineer Colquhoun for the roads in question with creditable activity.

8. I beg to state that our expenditure in maintaining roads is made on *system.* They are carefully measured and the estimate of required work is made accordingly (regulated by the sanctioned allowance).

9. I believe that Mr. Knox has completely misunderstood any thing he may have heard from Mr. Colquhoun. It is not likely that Mr. Colquhoun would *charge himself* with "extravagant expenditure," when he knew perfectly well that he was working quite *en regle.* I have not heard a word from Mr. Knox on the subject.

10. With reference to paragraph 4 of Mr. Knox's letter to Government, I request that my* letters to him No. 72, 11th October 1860, and No. 92, 29th November 1860 may be laid before Government. In them I explained that I did not wish to make over any portion of the main roads to him, as they were very well managed by Sub-Engineer Colquhoun, and as separate accounts would be a great inconvenience. I also stated that I could not give him the *discretionary* allowance, as it was intended to meet other requirements besides those of Chicacole itself; but that, with the Collector's concurrence, I would assist him with material, &c., whenever I could. I also pointed out the many useful works on which the prisoners might be employed with great advantage, under Mr. Knox's immediate orders and arrangements.

* As forwarded with my letter No. 99, 18th July 1861.

11. In conclusion I trust I may be allowed to retain the charge of the roads in question. They are far too important to be made over to any other than the Public Works Department. I can insist on good work and punctual and correct accounts from the members of my Department, but I cannot do so from others.

12. I speak from *personal* knowledge in reporting on the good condition of the roads, as I inspected them during my recent visit to Chicacole, 5th to 7th July 1861 inclusive.

13. If Mr. Knox finds he cannot give the prisoners work elsewhere, I will employ them on the roads as well as I can, though of course the value of their work is very limited and inadequate to the demands of the roads. I have told Mr. Knox I would do so, but he has objected to their employment in this way.

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1. Submitted to Government with reference to their Proceedings No. 1,298, dated 13th July 1861, and in continuation of Colonel Birdwood's letter No. 2,766, dated 16th idem. The District Engineer plainly shows that there has been no unnecessary or extravagant expenditure as asserted by the Civil and Session Judge.

1 Letter from District Engineer, No. 99, dated 18th July 1861, with 1 Enclosure.

2. The Chief Engineer recommends that the roads may not be withdrawn from the District Engineer's control, as under the present arrangement they are acknowlodged to be in excellent order.

3. It is observed that the Inspector General of Jails in his Proceedings of the 16th instant, No. 375, copy of which he informs me he has sent to Government, has laid down the mode in which the prisoners may be employed in connexion with the Public Works Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 193. ORDER THEREON, 19th September 1861, No. 1,752.

Ordered to be communicated to the Judicial Department, with reference to the Order in this Department, dated 6th August 1861, No. 1,474.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 194. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 1st July 1861, No. 2,164 :—

SIR,

1. With reference to Proceedings Madras Government marginally noted, sanctioning a revised estimate amounting to Rupees 13,180 for rebuilding the bridge over the Vellaur at Valungany on the high road from Negapatam to point Calymere (the Tappal route between Madras and Ceylon) in the Tanjore District, I have the honor to forward the accompanying correspondence received from the District Engineer of Tanjore, from which it will be observed that a further sum of Rupees 1,099 was expended in completing the structure.

No. 53, dated 6th January 1860.
1 Letter from District Engineer, 1st June 1860, No. 36, with two enclosures.
1 Do. from do. No. 291, with six enclosures.
1 Do. from do. No. 292.
1 Do. to do. No. 9,043.
1 Do. to do. No. 12,336.
1 Do. from do. 6th May 1861, No. 11, with two bills and a packet of vouchers.

2. The revised estimate as above, provided for the foundations being laid on wells, but on the removal of the old work, a softish description of clay mixed with sand and nodules of kunkar was met with, in which it would have been impossible to have laid down wells, it was therefore found necessary to go to a greater depth, and at 12 feet below the surface of the river bed, a good solid bed of kunkar was met with.

3. Owing to deviations from the estimate, viz., the substitution of solid foundations for wells, a saving of about Rupees 300 would, notwithstanding, have been effected, had it not been found impossible to execute the brickwork at a lower rate than $2\frac{1}{4}$ Annas per foot or $\frac{1}{4}$ Anna more than the estimated rate, and the cost in consequence has exceeded the estimated amount as marginally noted.

	RS.	A.	P.
Estimated amount..	3,748	1	6
Amount paid	3,813	6	11
Total..	65	5	5

4. In the estimate Rupees 1,000 were allowed for embankments, but on account of the quantity of earth required to fill up the deep holes formed by the scour of the stream both above and below the old bridge, and the enhanced cost of labor throughout the District, and especially near Negapatam, on account of the Railway under construction, the expenditure amounts to Rupees 1,910.

5. An item of Rupees 200 was allowed for removing the old masonry, while the actual cost amounts to Rupees 525, as the former piers had to be removed to their very foundations and the greatest care was necessary in the removal of the southern arch so as not to affect in any way the abutment and pier on which it rested.

In letter No. 291, 31st December 1860.

6. Enclosure No. 3 exhibits the items in the original estimate, as also those of work actually carried out; there is an excess it will be observed under the head of "approaches," this was owing to its being found necessary in April last to open a communication between the river above and below the bridge for the passage of the drainage water, which did not escape as fast as was expected through the Vellaur surplus; and this of course it was necessary to fill up again.

	Cubic feet.
Original estimate..	11,100
Revised estimate	7,970

7. There is a difference also in the cubical content allowed for arch work in the original estimate and that executed, owing to the arch being built of different thicknesses varying from three bricks at the haunches to two bricks at the crown, instead of $2\frac{1}{2}$ bricks throughout. The rates entered in Enclosure No. 3 above referred to are explained by the District Engineer to be assumed, and the reason for this will be found detailed in paragraph 4 of his letter, dated 6th May 1861. The bridge was opened for traffic on the 3rd September last.

8. A revised estimate for the work was received on the 31st December last, but as during its examination it was observed from the Progress Report that the work was completed, the District Engineer was called upon to forward the bill; in sending which he represented that the work was completed under the impression that the sanction of Government had been sought to the supplemental estimate. The estimate of work actually carried out in reconstructing the bridge, forwarded by the District Engineer, was corrected in this Office with reference to the plan, as was also the statement exhibiting a comparison of the cost of work done with the original estimate; but Captain Oakes explains that these corrections (shown in red ink) are inaccurate, as the new retaining wall was built of a different section from that which the Central Office had supposed it to have been constructed.

9. The bridge was inspected by the District Engineer on several occasions during its progress, and the materials and workmanship were then ascertained to be unexceptionable. Captain Oakes remarks that the successful completion of the work "is very creditable to "Assistant Overseer Apathoray Mudali, who, notwithstanding the demands for labor by the "Railway Department within eight miles of the work, was enabled to carry it out at about half "the cost at which the Railway Department in the neighbourhood worked."

	RS.	A.	P.
Bill, A. D. No. 295..	9,429	5	1
,, A. D. No. 296	4,849	7	9
Total..	14 278	12	10

Proceedings of Government, 10th January 1861, No. 54.

10. Under the above explanation I recommend that the bills now forwarded, amounting to Rupees 14,278-12-10, may be sanctioned, which is Rupees 1,099 or a little above 8 per cent. in excess of the estimate referred to in the 1st paragraph. The sum of Rupees 123 paid to Rungaswámi Mudali in excess of the price of coral stone, referred to in the Proceedings of Government noted in the margin, has been properly deducted in the bills.

No. 195. ORDER THEREON, 19th September 1861, No. 1,753.

Under the explanation afforded, the bill of Rupees 14,278-12-10 for the completion of the Vellaur bridge in Tanjore, is sanctioned.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 196. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th September 1861, No. 4,665 :—

SIR,

1. As requested in the Proceedings of Government, No. 1,630, dated 28th August 1861, I have the honor to submit the following particulars of the claims against Mr. Addis, showing distinctly the items already adjusted, those he admits, and those which he disputes.

	Items.	Adjudged.			Adjusted.			Admitted.			Disputed.		
		RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Order of Government, No. 1,558, dated 11th Aug. 1857.	Value of bricks supplied by Contractor David, but rejected by Lieut. Hemery.	3,287	8	0	1,342	0	0	1,695	8	0	250	0	0
	Balance due by the above Contractor alleged to have been repaid by Mr. Addis, but there is no document to prove it...	1,442	8	0	0	0	0	0	0	0	1,442	8	0
	Portion of advance for Tramways...	250	0	0	250	0	0	0	0	0	0	0	0
		4,980	0	0									
Order of Government, No. 316, dated 5th Feb. 1859.	Balance of advances to six Contractors......	7,241	1	8	0	0	0	0	0	0	7,241	1	8
	Total.....	12,221	1	8	1,592	0	0	1,695	8	0	8,933	9	8

2. Out of the total amount adjusted, Rupees 1,100 were recovered from Mr. Addis by eleven instalments of 100 Rupees each, and the difference Rupees 492 is the value of the materials (bricks and timber) used on Government works ordered to be credited to that gentleman.

No. 197. ORDER THEREON, 19th September 1861, No. 1,754.

Under the circumstances stated, the Government are not disposed to try their claims against Mr. Addis by a civil action, and they desire that the payment of the sum, viz., Rupees 1,695½ offered by him, be at once accepted.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 198. Read the following Proceedings of the Madras Government in the Military Department, dated 10th September 1861, No. 3,167 :—

Approving the estimate for re-roofing and thoroughly repairing the lower Barracks at Raneepett, in the District of North Arcot. } (Vide Millitary Proceedings, 10th September 1861, Nos. 151-152.)

No. 199. ORDER THEREON, 19th September 1861, No. 1,755.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter dated 26th August 1861, No. 4,307.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 200. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 9th July 1861, No. 2,456 :—

SIR,

1. I have the honor to submit for the orders of Government, the accompanying letter from the Advocate General, giving cover to the "opinion" called for in their Proceedings of the 4th June 1861, No. 1,038, as to whether Mr. Overseer Dudgeon of the Madura District is liable, under the the terms of his Covenant, to the penalty incurred by members of the Public Works Department, for not passing the prescribed vernacular examination, and whether under such Covenants, the qualification can be imposed.

1 Letter from the Advocate General, dated 29th June 1861, with Opinion of the same date.
1 Do. from District Engineer Madura, dated 1st February 1861, No. 1,104, with one enclosure.
1 Do. do. dated 25th February 1861, No 1,208, with Covenant.
1 Do. to do. dated 15th March 1861. No. 10,997.
1 Do. from do. dated 30th April 1861, No. 1,493, with one enclosure.

2. It will be observed, that both questions have been answered in the negative, and with reference to the several remarks made by Mr. Smyth on the subject, I beg to state that he has apparently misunderstood Colonel Horsley's views.

3. In the first place, Colonel Horsley's opinion as to the question of penalty was derived from the Proceedings of Government, dated 25th August 1859, No. 2,030, and not from the Government Orders of 1855, as stated in paragraph 9 of the Opinion ; and the latter Orders* were only quoted by this Office to prove that it had from a short time after Mr. Dudgeon's arrival in this country, been expected by Government that he would acquire a competent knowledge of a Native language.

* Government of India, dated 23rd November 1855, No. 2,571.
Madras Government, dated 13th December 1855, No. 900.

4. With regard to paragraph 11 of the Advocate General's Opinion, I would remark that the primary cause of Captain (Lieutenant-Colonel) Hitchins' exemption, was that he had "but little business with the people," a fact which is omitted in Mr. Smyth's quotation ; and that if Lieutenant-Colonel Hitchins were transferred to another District, he would be subject to the rules relating to a vernacular examination, the same as any other Officer of the Public Works Department.

5. Mr. Dudgeon is an *Upper* and not a *Lower* Subordinate as supposed by Mr. Smyth, and he sought to obtain in all twenty-five months to qualify in the native language, instead of only nine, as entered in paragraph 12 of the Opinion.

From the 25th August 1859.

6. With regard to paragraph 14 of the Advocate General's Opinion, I would remark that as Captain Paxton did not speak confidently of Mr. Dudgeon's acquaintance with the Tamil language, and, moreover, recommended that a further period of nine months should be granted, it was concluded that he was of opinion, that Mr. Dudgeon had not attained the prescribed standard.

Vide paragraph 1 of letter dated 1st February 1861, No. 1,104.

7. As respects paragraph 16 of the "opinion," it seems to me that Colonel Horsley's remarks are not open to the exception taken to them by Mr. Smyth ; many of the Subordinates of the Department who joined either prior to, or a short time after Mr. Dudgeon's arrival in the country, and who have since been similarly employed having passed the vernacular examination.

8. With reference to the latter part of paragraph 12 and to paragraph 18 of the Opinion, it appears to me that no other course is open than to exempt not only Mr. Dudgeon, but all the Covenanted Engineers who came out in 1855, from the penalty of deduction of salary, in the event of failure to pass in a Native language, and I have therefore to request that sanction may be granted for the refund to

W. Fraser, Esq., 1st Assistant District Engineer, Tanjore.
E. E. Merrall, Esq., do. North Canara.
J. H. Dopping, Esq., do. Madras.
J. Brosnahan, Esq., do. Malabar.
Mr. C. S. Dudgeon, Overseer, Madura.
Mr. S. Evans, do. Coimbatore.

Mr. Dudgeon, of such portion of his salary as may have been withheld from him since January last, under paragraph 2 of the Proceedings of Government, dated 8th March 1861, No. 471, and further, that I may be favored with orders regarding the other Covenanted Civil Engineers and Overseers above alluded to, and whose Covenants are, I believe, all alike so far as regards omission to mention anything concerning the necessity of their acquiring a knowledge of a native language.

No. 201. ORDER THEREON, 20th September 1861, No. 1,756.

1. With this letter the Chief Engineer submits the Opinion of the Advocate General, called for in the Order of Government, dated 4th June 1861, No. 1,038, as to whether Mr. Overseer Dudgeon is liable under the terms of his Covenant to the penalty of forfeiture of pay incurred by members of the Public Works Department for not passing the prescribed vernacular examination, and whether under such Covenants the qualification can be imposed.

2. Mr. Smyth answers both the questions in the negative. He states, that the orders of Government regarding the examination of the members of the Public Works Department in the languages of the country, do not constitute "Rules and Regulations of the Public Works Department" *within the meaning of Mr. Dudgeon's Covenant*, and that therefore he and the other members of the Department similarly circumstanced cannot be bound by them.

3. The Government resolve to accept the Advocate General's Opinion, and direct that the sums which Mr. Dudgeon and the other Covenanted Engineers in his position have forfeited for not passing in one of the vernacular languages, be refunded. The necessary sanction will be granted on the exact sums being reported.

4. But a knowledge of the vernacular languages is in many appointments so essential a qualification that the Government may justly require it, and refuse to promote those who do not possess it, to grades which will give them higher salaries than their Covenants secure to them. The Government therefore desire the Chief Engineer to intimate to the Covenanted Engineers generally, that while Government will scrupulously respect their Covenants those who fail to pass the prescribed vernacular examination must not expect promotion to appointments in which Government consider such a qualification necessary. The appointments in which a knowledge of the vernacular is not very necessary will, however, with their emoluments be open to unpassed men, and the salaries provided for in the Covenants will in no case be reduced for not passing.

5. The Government desire to point to the Deputy Chief Engineer lately in charge of the Central Office, that in applying to the Advocate General direct for his opinion, he deviated from the usual course. Such applications should always be sent through the Government Solicitor.

(Singed) C. G. MASTER,
Deputy Secretary to Government.

No. 202. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 5th September 1861, No. 4,624:—

SIR,

1. With reference to their Proceedings No. 1,592, dated 21st August 1861, I have the honor to submit the names of the undermentioned individuals for promotion on the ground of distinguished merit, to the grades next above those which they respectively hold at present in the Public Works Department:—

1 Letter from District Engineer North Canara, No. 179, dated 30th January 1861, with three enclosures.
1 Letter from District Engineer Kurnool, No. 664, dated 1st October 1860, with one enclosure.
1 Letter from District Engineer Madura, No. 1,340, dated 27th March 1860.
1 Letter from District Engineer Tinnevelly, No. 175, dated 2nd March 1860.

Mr. J. G. Conran, Kurnool District, from Assistant Supervisor to Supervisor.
Mr. V. M. Fernandez, North Canara District, from Overseer to Assistant do.
A. Palanivelu Mudali, Madura District, from Assistant do. to Overseer.

* *Alias* Georges.

2. Mr. Conran* entered the Public Works Department on the 20th April 1848, as an Assistant Revenue Surveyor, and was appointed to his present position of Assistant Supervisor on the 27th January 1857. He is the senior of the Subordinates promoted to the rank of Assistant Supervisor on the date just mentioned, who have been recommended for advancement to a higher grade.

3. Captain Beckley, the late Acting District Engineer Kurnool, in his letter No. 664, dated 1st October last, brought to the notice of this Office, that although Mr. Conran had not an opportunity of particularly distinguishing himself by the execution of any very extensive work in the District requiring a large amount of engineering skill, yet that he would have no hesitation in placing him in charge of any important project. Captain Beckley, moreover, reported that Mr. Conran had conducted the duties of his Range in a very satisfactory manner; that he was very punctual in the submission of his accounts and careful in the conduct of his Office duties; that he was an excellent Surveyor and Draughtsman; that he thoroughly understood several native languages; that he possessed a considerable knowledge of Mathematics, and that his promotion would "neither be an over-reward to himself nor a supercession of the "claims of others." Copies of the testimonials obtained by Mr. Conran from the various Officers under whom he has been employed are herewith submitted for the information of Government.

4. As respects Mr. Fernandez, I would beg to observe that in their Proceedings No. 2,098, dated 9th October 1860, the Government declined to accede to my recommendation for his promotion to the rank of Assistant Supervisor on the following grounds:—

1st. That some of the Officers under whom Mr. Fernandez has served, thought less highly of his merits than Captain Walker did.

2nd. That his promotion would cause a very extensive supercession.

3rd. That as Mr. Fernandez appeared unwilling to leave the North Canara District, he was not entitled to special favor, and, moreover, was less valuable than others who were willing to go whenever ordered.

5. With reference to the first of the foregoing points, Captain Walker in his letter No. 179, dated 30th January 1861, forwards copy of a letter† from Captain Goddard, late District Engineer Canara, recommending Mr. Fernandez for promotion to the rank of Overseer, and bringing to notice that while that subordinate, prior to the re-organization of the Department, drew a salary of Rupees 91-4-0 he was on the date of his letter in receipt of only Rupees 80 per mensem, or Rupees 11-4-0 less than the former amount. Captain Walker, moreover, submits copy of a testimonial granted to Mr. Fernandez by Lieutenant-Colonel Boileau, under whose orders he had been employed in connection with the formation of the Raupoor Ghât in the late 2nd Division. Lieutenant-Colonel Boileau, it will be observed, bears testimony to the satisfactory manner in which Mr. Fernandez carried out the work entrusted to him, and to the tact evinced by that individual in the management of the large bodies of workmen employed under his immediate supervision, by which he succeeded in securing their confidence. Further, the District Engineer North Canara, brings to notice that Mr. Fernandez has never been unfavorably reported on by any of the Officers under whom he has been employed, and that his character in his native place is blameless.

† No. 423, dated 4th March 1857.

6. As respects the 2nd of the above points, the District Engineer urges that Mr. Fernandez claims for a better position in the Department than that of Assistant Overseer were altogether lost sight of in the re-organization of the Department when he was absent in England, and that even subsequent thereto more than 20 of the Assistant Overseers had been allowed to supersede Mr. Fernandez, notwithstanding that the date (6th April 1849) of his first appointment to the Department was far antecedent to theirs. Captain Walker, moreover, urges that Mr. Fernandez so far back as 1854, held a position equal to that of his present rank in the Public Works Department, and that considering the unfortunate manner in which his claims had been lost sight of, no Overseer on the Establishment could feel aggrieved by his promotion to an Assistant Supervisorship.

7. I would here observe that of the Overseers employed in the Department who are Mr. Fernandez's seniors in point of service, only the four noted in the margin have been recommended by the local Officers for promotion, but none of their claims have been so forcibly urged as those of Mr. Fernandez. Moreover, Mr. Ross, one of the four mentioned above, who is attached to the Bezwada Workshop will be otherwise provided for.

Assistant Commissary Hill.
Vádamuttu.
Acting Sub-Conductor Edmonds.
Mr. G. Ross.

8. With reference to the 3rd point, Captain Walker brings to notice that the only obstacle to Mr. Fernandez leaving North-Canara is, that he could not part with his services, and that the fact of that Subordinate having during the years 1853-54 and 1855 been employed in Mysore, and in the Districts of Canara, Bellary, Kurnool, Nellore and Cuddapah, is sufficient to show that he is free from the prejudices which bind his countrymen to their own District, a quality to which he is stated to owe his rise, and for which Captain Walker admires him.

9. Under these circumstances and for the reasons given in my letter No. 4,821 dated 17th September 1860, I would beg most strongly to recommend Mr. Fernandez's claims for the favorable consideration of Government, and would solicit on the ground of his great usefulness in the North Canara District, that sanction may be granted for his promotion to the rank of Assistant Supervisor.

10. In the event, however, of Government still adhering to the opinion expressed with reference to Mr. Fernandez in their Proceedings No. 2,098, dated 9th October 1860, already quoted, I would beg to submit the name of Overseer Smither for promotion to the rank of Assistant Supervisor.

11. Serjeant Smither entered the Public Works Department on the 16th November 1852, and amongst the subordinates who were promoted in January 1857 to the rank which he now holds, there is but one* whose entire service is greater than that of Serjeant Smither, but the claims of the latter for advancement to a higher grade have been more forcibly urged upon this Office.

* Overseer Hill.

12. In his letter No. 175, dated 2nd March 1860, Captain Payne, the late Acting District Engineer Tinnevelly, reported that Overseer Smither had distinguished himself by his zealous attention to his duties, uniform good conduct, tact in management of workmen, and ability in the execution of projects entrusted to him. Captain Payne, moreover, represented that the Overseer having served his apprenticeship under a London Bricklayer was thoroughly conversant with the nature and use of materials, and that the masonry works executed by him in Tinnevelly were always of a superior kind.

13. The present District Engineer Tinnevelly, Captain Winscom, also entertains a very high opinion of the merits and qualifications of Serjeant Smither and has on more than one occasion represented his great usefulness as an executive agent.

14. On Serjeant Smither's first appointment to the Department, he was posted to the 8th Division, which I was then in charge of, and I feel bound to say in justice to that individual, that during the time he was employed under my orders, I found him a very valuable and willing subordinate. I consider that Serjeant Smither has fairly earned the step for which I now recommend him.

15. Palanivelu Mudali, whose name is entered in paragraph 1 for promotion to the rank of Overseer, originally joined the Public Works Department on the 1st June 1844. He is the senior of the subordinates appointed with him to the rank of Assistant Overseer on the 27th January 1857, who have been recommended for promotion by the local Officers. In point of service in the Department, he has only two seniors, whose names are noted in the margin, but these have not been recommended for advancement.

Appaswámi Mudali.
Peragounda Naidu.

16. In his report for the year 1855, on the important works of the 8th Division, Lieutenant Roberts, the late Acting Civil Engineer, bore very favorable testimony to the skilful management and careful supervision of Palanivelu Mudali in the construction of a bridge of six arches of 30 feet span across the Goondam on Road No. 4, and I observe that the District Engineer Madura in his Administration Report for the year 1860-61, strongly recommends the Assistant Overseer for promotion, urging as his reason for doing so that he is an efficient, industrious, honest and well conducted public servant.

17. At the time that I was Civil Engineer in the 8th Division, Palanivelu Mudali was employed as the Maramut Superintendent of Madura, and afforded the Collector as well as myself the greatest satisfaction in the discharge of his duties, and I am of opinion that after a period of 17 years faithful service in the Department, during which he has secured for himself the approbation of all the Officers under whom he has been employed, he is fully deserving of the advancement to the grade of Overseer for which he has now been recommended.

18. Under the explanation now afforded, I trust that Government will be pleased, as exceptional cases, to authorize the promotion of the subordinates named above, to the grades next above those which they now hold in the Department.

No. 203. ORDER THEREON, 20th September 1861, No. 1,757.

Resolved that the Chief Engineer be informed that, in the opinion of Government, the case of none of the individuals referred to in this letter, constitutes such "distinguished merit" as the rule contemplates or would justify their promotion out of the prescribed course.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

Read again letter from District Engineer of Kurnool, dated 6th June 1861, No. 132, recorded in the Proceedings of Government, dated 1st July 1861, No. 1,209:—

No. 204. Read also the following letter from Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 5th September 1861, No. 25.

SIR,

* Nos. 1,016 and 1,209.

From Agent, 28th August 1861, No. 381, with an enclosure.

1. With reference to the Proceedings* of Government of 31st May and 1st July last, I have the honor to submit a letter from the Chief Engineer stating that the plan he intends to adopt in working the Ferry boats on the Canals, is to sling the boats in such a way as to be worked by travellers, and to place them under the care of the watchmen who will be required to protect the Canal banks.

2. If the Chief Engineer is able to carry out such an arrangement, it would obviate much expense and the evils generally attendant on Ferries, but under any circumstances, the expenses attendant on the maintenance and repair of these boats would fall on the Company and be borne against the revenues of the Canal.

3. With respect to the proposition made in the letter of the District Engineer Kurnool, on which Government in their Order of 1st July directed me to state my views, I beg to observe that I agree in the opinion expressed by him, that under-tunnels are preferable to bridges over the Canal, and that where Ferries are adopted, the boats should be built of iron instead of wood. I do not anticipate, however, the same annoyances or exactions from the use of Ferries as he expects, especially if the above-mentioned plan of the Chief Engineer can be carried out. There should of course be bridges at all places where the great traffic of the country is crossed, but as the mass of traffic will ultimately be conveyed by the Canal itself, there will not be the same necessity for the multiplication of large bridges as there would otherwise be.

No. 205. ORDER THEREON, 20th September 1861, No. 1,758.

1. The arrangements proposed by the Chief Engineer of the Irrigation and Canal Company for working the Ferries on the Company's Canals is approved. Captain Rundall correctly observes that the expenses attendant on the maintenance and repair of these boats will fall on the Company.

2. The Government observed in paragraph 3 of their Order dated 31st May 1861, No. 1,016, that in the estimates for the Canal from Sunkasala sanctioned in that Order, sufficient provision was not made for bridges, and in this view they are borne out by Lieutenant Beckley's letter dated 6th June 1861. That Officer states that four first class bridges will be required on the Canal in question in addition to a considerable number of Ferry boats or under-tunnels, but the estimate appears to provide only for one such bridge. Captain Rundall will therefore be requested to inform the Chief Engineer through the Agent that where the District Engineer states that bridges are necessary, they *must* be built. The District Engineer will be directed to fix the sites where more Ferries than those provided for in the estimate are needed.

3. The Government do not agree with the Consulting Engineer in his opinion that bridges are to be restricted to *traffic* roads; when the Canal interrupts the communication between villages of any size or importance a bridge or tunnel must be provided.

4. The Government will be glad to have Colonel Cotton's opinion on the under-tunnels proposed by the District Engineer.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 206. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th September 1861, No. 4,857:—

SIR,

1. With reference to the Proceedings of Government No. 1,180, dated 26th June 1861, I have the honor to inform you that from communications received from the District Engineer Presidency, and the Accountant General, to whom references were made on the subject, it does not appear that the transaction referred to in the above Proceedings, viz., an advance of Rupees 1,707-13-8 made by the Civil Architect on account of establishment and travelling allowances, has any connection with the former Officer, nor that it is exhibited, in the accounts received from Bengal, by the latter Officer.

Letter from District Engineerl Presidency, No. 460, dated 9th July 1861.
1 Letter from Accountant General, No. 1,259, dated 2nd August 1861.

2. No particulars are given in the above Proceedings, as to the party to whom the advance referred to was made, and in the absence of the same, this Office is unable to furnish any further information on the subject.

Ordered that the following letter be despatched.

No. 207. From C. G. MASTER, Esq., Deputy Secretary to the Government of Fort Saint George, to the Inspector General of Public Works Accounts, dated 20th September 1861, No. 1,759.

SIR,

I am directed to forward to you herewith copy of a letter from the Chief Engineer reporting that no information can be found in the accounts either of the Civil Architect or of the Accountant General, regarding the advance of Rupees 1,707-13-8 alluded to in your letter of 5th June 1861, No. 145.

Dated 13th September 1861, No. 4,857.

No. 208. Read the following letter from Lieutenant-Colonel H. YULE, Secretary to the Government of India, to J. D. SIM, Esq., Secretary to the Government of Madras, dated the 7th September 1861, No. 3,202:—

SIR,

1. I am directed by the Governor General in Council to request that with the permission of His Excellency the Governor in Council you will forward for the information of the Government of India, a copy of the contract concluded with the Madras Irrigation and Canal Company. The information is urgently needed, and it is requested that the copy may be sent with the greatest practicable dispatch.

2. If a reply can now be given to the letter* from this Department asking for the views of the Madras Government regarding the conditions under which the East India Irrigation and Canal Company should be allowed to undertake the Irrigation of Orissa and other works, without guarantee, the Government of India would be glad to receive it at once.

* No. 4,730, dated 12th September 1860.

Ordered that the following letter be despatched.

No. 209. From C. G. MASTER, Esq., Deputy Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, in the Public Works Department, dated 20th September 1861, No. 1,760.

SIR,

1. I am directed by the Governor in Council to inform you in reply to your letter of the 7th instant, No. 3,202, that this Government has not yet been furnished with any copy of the Contract with the Irrigation and Canal Company. Sir Charles Wood, in paragraph 5 of his Despatch, dated 17th October 1860, No. 59, informed this Government that the Contract had not then been finally executed, and no further information on the subject has since been received.

2. I am also to add that the views of this Government regarding the conditions under which the East India Irrigation and Canal Company should be allowed to undertake the irrigation of Orissa and other works, without guarantee, will be submitted to the Government of India at an early date.

Ordered that the following letter be despatched:—

No. 210. From C. G. MASTER, Esq., Deputy Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Home Department, dated 20th September 1861, No. 1,761.

SIR,

I am directed by the Governor in Council to forward to you herewith a Report from the Chief Engineer on the Navigable Rivers and Canals in this Presidency, together with an illustrative map, as called for in your letter, dated 18th July 1860, No. 1,491.

Read the following papers:—

No. 211. From Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 8th May 1861, No. 298.

SIR,

1. With reference to my letter No. 12,345, dated 23rd April 1861, I have the honor to submit for the information of Government the accompanying letter from the District Engineer Nellore, dated 1st May 1861, reporting the acquittal of Sub-Conductor and Sub-Overseer Shannon, by the Supreme Court, of the charge of embezzlement preferred against him, owing to the want of evidence to prove the *personal appropriation* by him of the sum overcharged.

Dated 1st May 1861.

2. Notwithstanding this acquittal, the District Engineer considers Mr. Shannon morally culpable and guilty of gross dereliction of duty. He, moreover, is of opinion that the over-charge in the Sidarapád tank case is clearly proved against Mr. Shannon, and that the false entries in the other two cases* are open to such grave suspicion, as to render him unfit for the Department, and more particularly in the Nellore District, where no Officer can in future place any confidence in his integrity. I purpose therefore informing Captain Greenaway that he is fully competent to dispense with Sub-Overseer Shannon's services under the Rules of the Department, as he is attached to the Lower Subordinate grade. In the meantime, I have addressed the Commandant of Engineers requesting that he will be so good as to obtain the orders of Government on the subject of the Warrant held by him as Sub-Conductor in the Public Works Department.

* Dantalla Tank. Amancherla do.

3. These Warrants were intended to be conferred upon well deserving men as a reward for their good conduct and previous services, but as Mr. Shannon has shown himself altogether unfitted for further employment in the Department, it follows, I conclude, that he should lose his Warrant also, and be remanded to his Corps.†

† 2nd European Light Infantry.

4. With regard to the over-charge of Rupees 80 in the repairs of the Sidarapád Tank, the District Engineer Nellore, requests to be informed, whether the amount is to be written off, or to be recovered from Mr. Shannon. Considering that the Supreme Court has acquitted him of the charges preferred against him, I do not see how the money can now be recovered, and I have accordingly to request the sanction of Government for writing off the amount to "Profit and Loss" in the accounts of the District Engineer.

No. 212. Proceedings of the Madras Government in the Judicial Department, dated 17th May 1861, No. 655:—

Communicating Advocate General's letter, regarding the charges against Patrick J. Shannon and one Abbaya in the Public Works Department. } (*Vide* Judicial Proceedings, 17th May 1861, Nos. 113 @ 115.)

Endorsement of the Chief Engineer, dated Chepauk, 25th May 1861, No. 876.

No. 213. From Captain T. GREENAWAY, Acting District Engineer Nellore, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Nellore, 10th May 1861, No. 712.

SIR,

1. In reply to your letter, No. 268 of 7th instant, I have the honor to forward a brief statement of the facts connected with Mr. Shannon's case.

2. Captain Ritherdon, the Officer of the Nellore Range, reported in January 1861, that the Sub-Overseer, Mr. Shannon, had been charged by a Gumáshta with falsification of accounts of Dantalla and Amancherla Tanks; and by certain Wudders and Contractors with entering payments against them which they had never received.

3. I investigated the case, the false entries were plain enough, but Mr. Shannon taking warning from the fact of the complaint having been preferred, had promptly applied to his Officer for the Return of the Progress Reports that he might correct certain errors ; with respect to the complaint of non-payment of work people, evidence was so contradictory that I thought it desirable to send the case to the Magistrate who could put the witnesses on oath. The Magistrate entered very fully into all circumstances connected with the case, and I directed the Officer of the Range to ascertain whether any other irregularities existed in the works under Mr. Shannon's charge.

4. The Magistrate committed the Sub-Overseer for trial at the Supreme Court on three counts, viz., the Dantalla and Amancherla cases, and that of over-charge on the Sidarapád work, the result of the trial has already been communicated.

5. My reasons for considering him unfit for further service in the Department are as follows:—

6. The over-charge on the Sidarapád Tank was palpable and far too great to be accounted for by any excuse whatever. The Sub-Overseer was solely responsible for these payments, and although his lawyer tried to make out that he might possibly have been an innocent victim to the arts of Gumáshta and Contractor, and chargeable with nothing worse than negligence, I imagine such a plea would not even give the culprit the "benefit of a doubt" with any one accustomed to the working of this Department.

7. The false entries in the Progress Report of the other works were unquestionably made, and only attempted to be rectified *after* the charge of fraud had been brought forward.

8. Mr. Shannon's character for integrity does not by any means stand high in general rumor, which was indeed the reason why I removed him from thr Northern Range to the Nellore Range, where a sharper watch would be kept over him.

9. I consider him altogether untrustworthy and unfit to be in charge of any work whatever.

Submitted for the information of Government in continuation of the Chief Engineer's letter No. 298, dated 8th May 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 214. Proceedings of the Madras Government in the Military Department, dated 22nd June 1861, No. 2,157:—

Concurring in the opinion of the Provincial Commander-in-Chief, that it is unadvisable to deprive Mr. Shannon of his Warrant. (*Vide* Military Proceedings, 22nd June 1861, Nos. 446 @ 448.)

No. 215. From Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 31st July 1861, No. 3,351.

SIR,

1. With reference to my letter No. 298, dated 8th May 1861, I have the honor to report for the information of Government that on the 4th instant, the Officer in charge of the Commandant of Engineer's Office favored me with a copy of the Proceedings of Government No. 2,157, dated 22nd June 1861, in the Military Department, relative to the withdrawal of the Warrant held by Sub-Conductor Shannon. This Order I observed was communicated to the Public Works Department, and under the impression that it would have been forwarded to me by that Department in the usual manner, I refrained up to the present time from addressing Government further on the subject.

2. It will be observed from the Proceedings alluded to above, that the Government express their concurrence in the opinion of the Provincial Commander-in-Chief, and consider it undesirable, under the circumstances represented by the Advocate General, to deprive Mr. Shannon of his Warrant; and as he, in common with others in the Department, holds that Warrant by virtue of his connection with the Public Works Department, I would solicit the instructions of Government, as to whether he is still to be retained in the Department, and to be restored to his former position of Sub-Overseer, 1st Class, 3rd Grade.

3. The late Acting District Engineer Nellore, Captain Greenaway, in his letter forwarded with mine No. 298, dated 8th May last, objected to Mr. Shannon's continued employment in that District, on the grounds that none of the Officers attached thereto could place any confidence in his integrity, and while there is this strong conviction of his moral guilt, notwithstanding his acquittal on legal grounds, I consider that even if re-instated, he should not be posted to the same District, but be transferred to some other. Before, however, making any final arrangements, I request to be favored with the definite orders of Government on the subject.

4. From the accompanying Telegram received from Captain Greenaway, it will be observed that Mr. Shannon is at Nellore, but pending receipt of orders on his case, has not been employed. I would therefore request to be informed, in the event of Government approving of the arrangement above proposed, whether Mr. Shannon is to be allowed to draw his civil salary from the date of his suspension, viz., 15th January last, to that on which he may report his arrival in the District to which he may be appointed.

No. 216. ORDER THEREON, 20th September 1861, No. 1,762.

1. Under the circumstances of the case the Government direct the restoration of Mr. Shannon to his former post as Sub-Overseer, 1st Class, 3rd Grade; but he will be transferred to some other District and there placed under proper supervision until the Chief Engineer thinks fit to employ him in independent charge or to recommend his removal from the Department on other grounds than the charges now brought against him. The Chief Engineer will determine the District to which Mr. Shannon is to be posted.

2. The full amount of the pay due to Mr. Shannon will be passed to him from the date of his suspension, *less* any overpayments proved to have been made by him through carelessness. These should be re-imbursed by him and the balance only passed to him. Colonel Horsley will accordingly settle the amount of the re-payment to be made by the Sub-Overseer.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

Read again letters from the Chief Engineer, dated 17th and 28th August 1861, Nos. 4,024 and 4,367, recorded in the Proceedings of Government, dated 20th August and 3rd September 1861 respectively:—

No. 217. Read also the following Proceedings of the Board of Revenue, dated 10th September 1861, No. 4,916.

Read Proceedings of the Madras Government, Public Works Department, Public, dated 3rd September 1861, No. 1,659.

(In Consultations, 4th September 1861, No. 5,624.)

The Board observe that the cost of the Rain Gauges supplied to District Officers can be met by them out of the contingent charges provided for in the Budget, as the amount is trifling, and no separate provision appears necessary for such petty items.

(A true Extract.)

(Signed) W. HUDLESTON, *Secretary.*

No. 218. ORDER THEREON, 20th September 1861, No. 1,763.

The proposals of the Chief Engineer to have 100 of Bayley's Rain Gauges made at a cost of Rupees 2 each, to meet the requirements of the Revenue Department, and to keep always on hand a small supply of these Gauges, are sanctioned.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 219. Read the following Proceedings of the Madras Government, in the Educational Department, dated 17th September 1861, No. 10 :—

Read the following letter from A. J. ARBUTHNOT, Esq., Director of Public Instruction, to the Chief Secretary to Government, Fort Saint George, dated Kunúr, 13th August 1861, No. 1,622.

SIR,

1. I have the honor to request that I may be authorized to make the following grants-in-aid of the erection of buildings for the undermentioned schools :—

(1.) A grant of Rupees 500 for an Anglo-Vernacular School lately established by the Wesleyan Mission at Sydapet.

(2.) A grant of Rupees 650 in aid of certain additions which are being made to the school-house belonging to the Wesleyan Mission at Negapatam.

(3.) A grant of Rupees 325 for an Anglo-Vernacular School at Palaveram, which is maintained by subscription, and is under the management of the Chaplain of Saint Thomas' Mount.

2. The applications for the first two of the above-mentioned grants reached me before I received the Proceedings of Government under date the 10th July 1861, No. 994, and being under the impression that as the grant-in-aid fund had been increased by the orders passed on my Budget estimate, I was at liberty to sanction such grants under the authority vested in me in the Extract Minutes of Consultation of the 16th August 1858, I informed the Managers that I was prepared to comply with their applications. The amount of the grants, Rupees 1,475, can be defrayed out of the sum of Rupees 3,000 sanctioned in the Budget estimate under the head of "projects contingent on applications for Grants-in-aid of building School-houses being "received."

The Government sanction the grants proposed in aid of the Schools referred to, amounting in the aggregate to Rupees (1,475) one thousand four hundred and seventy-five. The amount can, it is observed, be debited against the sum allotted in the Budget estimate for projects contingent on applications for Grants-in-aid of building School-houses being received.

(True Extract.)

(Signed) W. S. WHITESIDE,
Secretary to Government.

No. 220. ORDER THEREON, 20th September 1861, No. 1,764.

Ordered to be communicated to the Chief Engineer for information.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 221. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 11th September 1861, No. 4,796:—

SIR,

1. I have the honor to report for the information of Government that Captain Chambers, the late District Engineer Kistna, in his letter No. 217, dated 14th January 1861, recommended the undermentioned individuals for temporary employment as Sub-Overseer's 2nd Class, 3rd Grade, to fill the vacancies which then existed in the Lower Subordinate establishment of the District:—

1 Letter from District Engineer No. 217, dated 14th January 1861.
1 Do. from do. No. 87, dated 26th August 1861, with one enclosure.

Motúkúri Parthasaradi............ *vice* Juggennaikulu, dismissed.
D. Sambia.......................... *vice* Bashacarlu, deceased.
Abdúl Khader...................... *vice* Cunchiah, do.

2. The grounds of the District Engineer's recommendations in favor of the above-mentioned individuals are stated opposite to each :—

Motúkúri Parthasaradi........................	Was employed for 6 years on the principal works on both sides of the river, having had at one time the superintendence of 3,000 men; was appointed a Sub-Overseer in 1857, but consequent on the reduction of establishments in that year lost his appointment; was favorably thought of by himself, Major Orr, Lieutenant Beatty and Mr. Sage.
D. Sambia..................................	Was employed for 5 years in the Department, $3\frac{1}{2}$ of which as Overseer's Gumáshta; was strongly recommended by Captain Pollard as likely to prove a valuable Subordinate.
Abdúl Khader..................................	Was employed in the Department for 14 years, 9 as a Maistry on the Dowlaishwaram Anicut and Quarries, and 5 in the same capacity on the Kistna Anicut, Quarries, and works generally. Was appointed a Sub-Overseer in 1857, but lost his appointment under the same circumstances as Párthásaradi; was trustworthy, bore an excellent character; was very useful in all kinds of work, understood bricklaying and was able to execute an ordinary work from a plan.

3. Under these circumstances, and agreeably to the District Engineer's recommendation, Captain Chambers was authorized in the Proceedings of this Office No. 10,168, dated 21st February last, to entertain the men as temporary Sub-Overseers 2nd Class, 3rd Grade, for a period not exceeding six months.

4. In pursuance of this Order, Párthasaradi, Sambiah, and Abdúl Khader entered upon their duties on the 25th February last, and as the period for which their temporary employment was authorized expired on the 24th ultimo, the District Engineer requests* that the sanction of Government may be obtained for a continuance of their services.

* In letter No. 87, dated 26th August 1861.

5. As the three men are reported to have conducted themselves well during the past six months, and to have afforded the greatest satisfaction in the discharge of their respective duties, I have the honor to request that their continued employment until the services of passed Candidates shall be available to fill the vacant posts, may be authorized from the 25th ultimo.

No. 222. ORDER THEREON, 21st September 1861, No. 1,765.

Under the circumstances stated, permission is granted for the continued employment of the three individuals named in the margin as Sub-Overseers 2nd Class, 3rd Grade, in the Kistna District, for twelve months from the 25th August 1861, after which period a further report should be submitted on the cases of these men.

M. Parthasaradi.
D. Sambia.
Abdúl Khader.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 223. Read the following Endorsement of the Chief Engineer, dated Chepauk, 2nd September 1861, No. 4,541 :—

Read the following letter from Captain E. A. FOORD, District Engineer South Arcot, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer Southern Circle, dated Cuddalore, 23rd August 1861, No. 82.

SIR,

1. I have the honor to state with reference to Extract from the Chief Engineer's Proceedings No. 3,706, that the amount paid to the father of the cooly who was killed at Gingee in May, cannot be recovered from the Maistry and Sub-Overseers, for it was not from their neglect of duty and orders that that accident occurred, but the other accident at the Ragavien Head Sluice. In the latter case, no gratuity was given or asked for.

2. After reporting the occurrence of the two accidents, I was called upon to state more precisely the degree of blame to be attached to each of the Sub-Overseers and the Maistry employed near the Ragavien bridge, and also whether the woman killed at the bridge was employed on any work or was only a casual passerby. These additional particulars I furnished in my letter of the 2nd July, No. 50.

Chief Engineer's letter, 13th June No. 1,517.

3. I did not forward a statement of the same kind as in the case of the accident at Gingee, as there was no one dependent on the deceased for support, and no application was made for any gratuity.

4. Since my report was made, I have been to the Penár Anicut, and examined the Ragavien Head Sluice. The accident occurred exactly as described.

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1. Submitted for the information of Government, with reference to their Proceedings No. 1,464, dated 5th August 1861.

2. It will be observed that it was the accident at the Ragavien Head Sluice and not that which occurred at Gingee in May last, that was occasioned by the neglect of duty on the part of the Maistry and Sub-Overseers named in the margin. The Chief Engineer, therefore, considers that these persons cannot be called upon to make good the amount* paid to the father of the cooly killed at the latter place, and accordingly solicits that that portion of the order quoted above may be cancelled.

Maistry Govindo Mudali,
Sub-Overseer Periana Mudali.
Do. Camsth.

* Rupees 20

3. The District Engineer's letter No. 50, dated 2nd July 1861, furnishing information regarding the woman who was accidentally killed at the Ragavien bridge, was submitted to Government with Lieutenant-Colonel Birdwood's letter No. 2,818, dated 17th July 1861. In this case no gratuity was given or asked for.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 224. ORDER THEREON, 21st September 1861, No. 1,766.

As the Maistry and Sub-Overseers named above were employed on the Ragavien Channel, and not at the gravel quarry at Gingee where the accident occurred, which resulted in the death of a cooly and the payment to the man's father of a gratuity of 20 Rupees, that sum cannot be recovered from the above-mentioned parties as ordered in Proceedings, dated 5th August last, No. 1,461. That part of the Order, therefore, is hereby cancelled.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 225. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 3rd July 1861, No. 2,302 :—

SIR,

1. With reference to their Proceedings No. 1,188, dated 27th June 1861, I have the honor to report for the information of Government that for the reasons detailed below, it has been

found altogether impracticable to furnish any reliable data whereby to judge of the PERMANENT additional expense that will be involved in carrying out the proposition made in paragraph 4 of my letter No. 1,487, dated 12th June 1861.

Assistant Supervisors.	Civil salary.			Military pay and allowances.			Total.			Amount drawn by Civilians.			Difference.		
	RS.	A.	P.	RS	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Serjeant H. Lee	100	0	0	31	4	9	131	4	9	150	0	0	18	11	3
Do. D. Campbell ..	100	0	0	31	4	9	131	4	9	150	0	0	18	11	3
Do. C. Fouracres ..	100	0	0	31	4	9	131	4	9	150	0	0	18	11	3
Do. J. O'Shaughnessy	100	0	0	31	4	9	131	4	9	150	0	0	18	11	3
	400	0	0	125	3	0	525	3	0	600	0	0	74	13	0

2. Taking the Department as it stands at present, the arrangement alluded to will affect only the individuals noted in the margin, to the extent set opposite each, the aggregate additional expense being Rupees 74-13-0 per mensem, or Rupees 897-12-0 per annum. This is owing to the circumstance that the men referred to while holding, respectively, the comparatively high rank of Assistant Supervisors in the Department, are only Serjeants in the Army, the pay and allowances attached to which are in the aggregate Rupees 18-11-3 less than the amount of the difference between the salaries authorized to Military men and Civilians holding the same Civil appointment.

3. The other Military men who hold at present the respective ranks of Assistant Supervisors, Supervisors, and Sub-Engineers, or either Sub-Conductors, Conductors, Assistant or Deputy Commissaries, and therefore receive Military pay and allowances in excess of the difference between the salaries authorized to them and Civilians holding the same appointments in the Department.

4. In the grade of Assistant Overseer, a Military man can under no circumstances receive less than a Civilian, because the difference between the Civil and Military scale of pay being only Rupees 10, the loss experienced by Military men is more than made up by the emoluments attached, even to the rank of Private in the Army.

5. In the grade of Overseer none but Privates in the Army can sustain loss under existing rules. The difference between the Military and Civil rates of pay for this class is only Rupees 20 per mensem, while the Military pay and allowances of Corporals and Serjeants are Rupees 22-4-7 and Rupees 31-4-9, respectively, those of Privates being Rupees 18-2-0.

6. It will thus be observed, that the additional expense which will be involved in giving effect to the arrangement proposed in my letter alluded to in paragraph 1, will depend entirely on the Military rank of the men, who hold the higher appointments in the Public Works Department. In cases in which the Military rank is high, there will be little or no additional outlay required, because the Military pay and allowances will either wholly or in a great measure, compensate for the difference in Civil salary. Where the opposite is the case, the outlay required to equalize the salaries of Military members with those of Civilians holding similar appointments in the Department will necessarily be much increased.

No. 226. ORDER THEREON, 21st September 1861, No. 1,767.

1. In his letter, dated 21st December 1860, the Military Auditor General brought to the notice of Government that in Madras Non-Commissioned Officers and Soldiers in the Department of Public Works drew the Military pay of the branch of the Army to which they belonged, while in Bengal they drew pay at Infantry rates only, and he recommended assimilation to the rule in Bengal.

2. In Government Order 11th January last, Military Department, Government sanctioned this change.

3. It now appears that in consequence of the new rule four Serjeants in the Department Public Works lose about 12 Rupees monthly, and draw 18 Rupees less than Civilians in the same situation. One of them appealed, and the Chief Engineer referred the matter to the Commandant of Engineers, who suggested that under no circumstances should a Military man draw less than a Civilian.

4. These papers were submitted to Government by Colonel Birdwood, while in charge of the Central Office, with his recommendation that the Military members of the Upper Subordinate establishment, whose salaries are affected by the new rule, may be allowed such sums as would make their salaries equal to those of Civilians in the same grade. That Officer was asked to state what would be the financial result of this arrangement. His letter above recorded is the reply, in which he states that the expense will vary with the numbers of Privates in the Department, the other grades generally drawing more than Civilians, and that at present the extra cost would be Rupees 898 per annum.

Order, dated 27th June 1861, No. 1,188.

5. The Governor in Council has given his careful consideration to the subject, and in his opinion there is no present necessity for adopting Colonel Birdwood's and Sir A. Cotton's suggestion. In the approaching re-organization of the Department, the pay of each situation will be fixed on the principle laid down in Government Order dated 30th July 1861, No. 1,509, *i. e.*, with reference only to the nature of the duties to be performed. Moreover, if equalization be adopted now, it ought to be complete, and those Military men who draw more than Civilians would be deprived of the excess.

6. The case of the men above referred to is somewhat hard, they have suddenly been deprived of what, to them, is a considerable sum; not because their allowances were too high, but because their Bengal brethren drew less in this particular item. Under these circumstances, the Government will consider in the Military Department whether the operation of the Government Order, issued from that Department under date 11th January last, can be suspended as regards present incumbents.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 227. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 16th September 1861, No. 4,945 :—

1 Letter from the District Engineer Vizagapatam, No. 1,059, dated 4th January 1861.
1 Do., No. 258, dated 20th June 1861, with 1 copy of letter from Collector.
1 Do., No. 562, dated 27th August 1861.
1 Estimate.
1 Report.
1 Plan.
1 Sketch.

SIR,

1. With the accompanying letter the District Engineer Vizagapatam forwards plan and estimate amounting to Rupees 2,940, for a small irrigation work in the Survasiddy Táluq.

2. The work estimated for is a masonry dam to be substituted for the present temporary structure thrown across a stream called the Pedda Gedda, a branch of the river Sarada, which takes its rise in the hills west of Vizagapatam, and is stated by the District Engineer to have a constant and certain supply.

3. The object of the dam is two-fold, to exclude the tide water and to raise the fresh for distribution to the adjacent land.

4. By the construction of this work the Collector states that an increased extent of land to the value of Rupees 380 will be brought under cultivation, besides a considerable saving in remissions, which are stated to have become chronic.

5. The Collector in his letter brings to the District Engineer's notice that the Tahsíldár recommended a different site where the construction of the dam would be cheaper, but Major Stewart, who has visited the locality, disapproves of this site, and shows that it will not combine the advantages which that fixed on by himself possesses.

6. The Collector having countersigned the estimate, which, with the plan, has been revised in this Office, I beg to recommend it for sanction from the General Funds at the District Engineer's disposal.

No. 228. ORDER THEREON, 21st September 1861, No. 1,768.

Sanctioned.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 229. Read the following letter from R. P. HARRISON, Esq., Accountant General, to J. D. SIM, Esq., Secretary to Government, dated Fort Saint George, 31st July 1861, No. 93 :—

SIR,

1. With reference to the Orders of Government, Nos. 2,081, 2,194 and 2,378, dated 6th and 25th October, and 17th November last, Public Works Department, I have the honor to submit copy of a letter from the Financial Secretary to the Government of India, No. 11,835, dated 30th November 1860 and its enclosure, regarding the mode of crediting in the public accounts, the rents of all State buildings, the gross proceeds of all Tolls and Ferries on Imperial Lines of Road, and private contributions in aid of public works.

2. In explanation of the delay that has taken place in laying these papers before Government, I beg to state that the draft of a letter on the subject was prepared in January last, but that as some doubt existed as to an opinion expressed by the Auditor General of India, the matter was reserved for reference to him previous to its final submission to Government. Meanwhile, a Circular was received from Mr. Drummond, No. 1, dated 21st February last, in which he stated that instructions would be sent relative to the exhibition in the General Territorial Books, of the expenditure under various heads of account, in reference to the new forms of account introduced from 1st May last, and I have been waiting to receive those instructions, in order to see how far they might affect the present question. The expected instructions however have not yet been received, and as the Chief Engineer has drawn attention to the subject, I have thought it proper no longer to delay the submission of the papers for the information of Government.

3. It will be observed from the papers now forwarded, that the Accountant General to the Government of India is of opinion that the rents of all State buildings are properly creditable as income of the Public Works Department, under the head of "Public Works Ordinary," that the proceeds of Tolls and Ferries should be credited to "Toll funds" subordinate to the same major head, and that rents and tolls need not, unless as a matter of local convenience, be paid in specie to the Officers of the Public Works Department. Under the new system of account, however, the former distinction of ordinary and extraordinary has been discontinued, and it is therefore thought that to credit the head of charge with the income derived from public works would, as a matter of account, diminish the cost of public works, which would thus be shown to represent only the difference between the two sides of accounts. There would of course be no objection to carry income in abatement of the cost of maintenance, but the distinction between ordinary, which comprised cost of maintenance, and extraordinary, which comprised cost of construction, or the dead stock of the Department, having as already remarked, been dispensed with, it will be obvious that so far as our Territorial Books are concerned, the amount of expenditure on each work, must be diminished, in rateable proportion, to the income of the year. I have made a special reference to the Auditor General of India on this point, the result of which I will lose no time in communicating to Government.

4. As regards private contributions in aid of public works, it will be seen that the Government of India has no objection to my adopting the course laid down in page 3 of the Report of Proceedings in the Public Works Department during 1857-58, published in Part II of the General Report on the Administration of the several Presidencies and Provinces of British India during the year 1857-58, and on this point I beg to observe in reference to Mr. Lushington's letter No. 24, dated 5th, recorded in the Government Order No. 2,194 of the 25th October last, that it would be more convenient that private contributions, instead of being credited in the

accounts of the District Engineers as therein suggested, should be received under the orders of Government, into the General or Collector's Treasuries as the case may be. This arrangement would obviate the necessity of the many entries enumerated in the margin of the 3rd paragraph of Mr. Lushington's letter above quoted. The contributions so received and credited to private contributions in aid of public works would, if the Government concur in this view, be ultimately carried to " Profit and Loss," and not for the reasons already assigned in respect to income, taken in abatement of charges incurred in construction.

5. Instructions have already been issued by this Office regarding the credit in the public accounts of the rent of all public buildings, and the attention of the Auditor General has been drawn to paragraph 6 of his Circular No. 1, dated 21st February last, above referred to.

From C. HUGH LUSHINGTON, Esq., Secretary to the Government of India, Financial Department, to the Acting Accountant General, Fort Saint George, dated Fort William, 30th November 1860, No. 11,835.

SIR,

No. 669, dated 23rd July 1860.
No. 1,568, dated 27th October 1860.

1. I am directed to acknowledge the receipt of your letters noted in the margin, requesting instructions as to whether the rent of all State buildings, no matter by whom occupied, and the gross proceeds of all Tolls and Ferries on Imperial Lines of Road, shall be regarded as income of the Public Works Department, and whether the amounts shall be paid in specie to the proper Officers of the Department of Public Works and credited in the Public Works Accounts, and if so, under what head of account these receipts should be credited?

2. In reply I am desired to forward, for your information and guidance, a copy of a Report from the Accountant General to this Government, in respect to the points referred to by you, and to intimate that the Honorable the President in Council has no objection to your adopting the course laid down in page 3 of the Report of Proceedings in the Public Works Department during 1857-58, published in Part II of the General Report on the Administration of the several Presidencies and Provinces of British India during the year 1857-58, an Extract of which you have given in the concluding paragraph of your letter, as to the adjustment of the expenditure of Government money, advanced in aid of private contributions for public works.

Extract from the Proceedings of the Government of India, in the Financial Department, dated 15th September, 1860.

Read the following :—

From F. LUSHINGTON, Esq., Acting Accountant General, Fort Saint George, to C. HUGH LUSHINGTON, Esq., Financial Secretary to the Government of India, dated Calcutta, 23rd July 1860, No. 669.

SIR,

1. In the Financial Resolution of the Government of India, No. 8,907, dated 25th October last, it was ruled, that all deductions on account of rent of public quarters occupied by Military Officers shall be paid over by Divisional Paymasters to Executive Engineers, and be credited in the Public Works Accounts directly as an income of the Public Works Department, Bengal, without being transferred through the Books of the Accountant General of the Government of India. In form A of the Anticipative Sketch Estimate, forwarded with the Financial Resolution of the Government of India, No. 3,121, dated 11th August 1855, the rent of buildings, &c., is entered as a receipt under Public Works Ordinary. In the Actual Account and Estimates of receipts and disbursements, accordingly, the rent of Government buildings is shown under "Public Works Ordinary," but in the General Territorial Books, it is taken to "General

Receipts." In the same manner are treated the gross proceeds of all Tolls and Ferries on lines of road "constructed and maintained from the public revenues," which under the Orders* of the Government of India, in the Public Works Department, No. 4,370, dated 3rd September 1858, were directed to form "a portion of the revenues of the State."

* Communicated to this Office with your Endorsement, No. 5,547, dated 29th September 1858.

2. The Madras Government, in the Public Works Department ruled, No. 2,290, on the 26th September last, that Subordinates of the Public Works Department residing in public buildings, shall be subject to deductions from their Civil Pay Abstracts on account of rent.

3. I have the honor to request that you will be pleased to inform me, whether it is the intention of the Government of India, that the rent of all State buildings, no matter by whom occupied, and the gross proceeds of all Tolls and Ferries on Imperial Lines of Road, shall be regarded as income of the Public Works Department, and that these amounts shall be paid over in specie to the proper Officers of the Department of Public Works and credited in the Public Works Accounts. If these be the intentions of the Government of India, I request further that I may be informed of the head of account to which these receipts should be credited in the Public Works accounts. The order of Government, however, appears to me to be opposed to the principle of the Budget system, which requires that incidental receipts of the several Departments be paid direct into the Treasury instead of being credited in aid of the estimates according to the faulty practice which formerly prevailed in England.

4. I take this opportunity of observing that this Office has received no instructions on the subject of "Grants-in-aid of Public Works" noticed at page 3 of the "Report of Proceedings in the "Public Works Department during the official year 1857-58," published in Part II of "the General Report on the Administration of the several Presidencies and Provinces of British India, during the year 1857-58." It is therein stated "that where public money is given in aid of private contributions, the sanction to the work and its execution should proceed in the regular course, "just as though the entire cost were borne by the Government. The contributions to be set "down as a portion of public works income, and the entire expenditure to appear in the public "accounts as the cost of the work, so that the private contribution is to be regarded as an aid "to the public work, not the public grant as an aid to the private undertaking." As I believe this course is intended to apply to the whole empire, I request that I may be furnished with the necessary instructions to adopt it.

Financial Department, Fort William, the 15th August 1860.

Forwarded, to the Accountant General to the Government of India for report, original paper to be returned.

REPORT.

Accountant General to the Government of India, No. 915, dated 10th September 1860, on the Financial Secretary's Docket No. 7,123, dated 15th August 1860.

1. The Accountant General of Madras enquires, whether it is the intention of Government that the rent of all State buildings and the gross proceeds of Tolls and Ferries on Imperial Lines of Road should be regarded as income of the Public Works Department, and paid in specie to Officers of that Department, and credited in its accounts, and if so, under what head?

2. On the first point, it may be remarked that as the cost of the public buildings is treated as a charge of the Public Works Department, the rents derived from them are properly creditable as income of that Department, under the head "Public Works Ordinary."

3. The proceeds of Tolls and Ferries were ordered in Resolution of the Public Works Department, dated 10th April 1857, to be credited to the general revenues under a special head of "Toll Funds," and the expenditure on account of the toll houses, roads, &c., as public works expenditure. The funds may therefore be regarded as assets of the Public Works

Vide paragraph 197 of Appendices to Public Works Code.

Department and credited under public works ordinary, though not appropriable like local funds on the authority of local functionaries, but when not collected by Officers of the Public Works Department there is no necessity for their being paid to them, as the requisite credits to that Department can be given through the accounts of the Collectors by the Government Accountants.

4. The rents payable for quarters occupied by Military men are realized by stoppages from their pay by the Pay Department, and to facilitate adjustment they have been ordered, as a special case, to be paid to the Barrack Master or Executive Officer at the station, who ordinarily collects all rents on public buildings.

5. It is not apparent in what respect the practice described is opposed to the principle of the Budget, for even where rents or tolls are received by the Public Works Department, they will not necessarily be credited in aid of the estimates, the Resolution cited above having distinctly declared that the income from Tolls and Ferries shall be credited to the general revenues.

6. As regards the instructions requested by the Accountant General of Madras on the subject of grants-in-aid of public works, a reference is suggested to the Public Works Department of the Government of India.

Financial Department, Fort William, the 15th September, 1860.

1. Ordered, that a copy of the above report and of the letter from the Accountant General Madras, No. 669, dated 23rd July last, be forwarded to the Public Works Department, for the consideration of the question referred to in the concluding paragraph of the above letter.

(A true Extract.)

(Signed) C. HUGH LUSHINGTON,
Secy. to the Govt. of India.

(True Copies.)

(Signed) A. LAMORINDIERE,
Acting 2nd Assistant Accountant General.

No. 230. ORDER THEREON, 21st September 1861, No. 1,769.

1. The Government will await the result of the reference which the Accountant General has made to the Auditor General of India, on the subject of crediting to the Public Works Department, the rents of all State buildings and the proceeds of Tolls and Ferries. They concur with Mr. Harrison in the remarks made by him in paragraph 3 of his letter above recorded, and would further add that, following the analogy of the orders of the Government of India in the case of the rents of buildings, the revenue from every tank or other public work in this Presidency, constructed by the Public Works Department, should be credited and the cost of construction be debited to that Department, an arrangement which could not be introduced without much additional account keeping. The general revenue which provides funds to the Department Public Works, seems the proper head to which the revenue from land as well as from buildings and the like should be credited. As regards Tolls on Imperial Lines the case is somewhat different. They are levied specially for the repair of roads, and the Department which does the repair may conveniently and properly take credit for them.

2. The suggestion contained in paragraph 4 of this letter, in regard to the payment of private contributions in aid of public works into the General or Collectorate Treasuries, as the case may be, is approved. On the subject of ultimately crediting these contributions to "Profit and Loss," Mr. Harrison had better correspond with the Auditor General, in order to make the practice uniform in all the Presidencies.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 231. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th September 1861, No. 4,855 :—

SIR,

1. I have the honor to forward herewith the accompanying original letter from the Deputy Quarter Master General of the Army, dated the 22nd July 1861, No. 170, in which he requests that the shed sanctioned for the cover of the Camp Equipage at Cocanada may be removed from the Budget, as it has been ordered that Masulipatam should be resumed as the place at which Stores are to be landed, the Godavery route not being approved of.

Item No. 11 of Budget No. 2 of 1861-62, Rupees 2,010.

2. The work in question appears in the current year's Budget as Item No. 11, and under the circumstances above stated, I request that its removal from the Budget may be authorized; and that the amount Rupees 2,010, may be added to the reserve fund for the current year.

3. The District Engineer Godavery has reported that the above work has not been commenced and that no expenditure had taken place on it.

No. 232. ORDER THEREON, 21st September 1861, No. 1,770.

Approved.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 233. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 12th September 1861, No. 4,822 :—

SIR,

1. With reference to the Proceedings of Government, dated 26th February 1861, No. 381, and to the "Fort St. George Gazette" marginally noted, I have the honor to submit an application from Corporal Flecknoe of the Sappers and Miners, Probationary Sub-Overseer, 2nd Class, 3rd Grade, requesting permission to resign his appointment in the Public Works Department, with a view to his joining the Civil Engineering College as a Military student.

Dated 8th March 1861, page 314.

1 Original letter, dated 2nd September 1861.

2. The services of Corporal Flecknoe were applied for by me in consequence of his previous training, with a view to his assisting the Superintendent of the Store Department in keeping accounts, in which capacity he has since been very useful; but as he is anxious to improve himself for the general duties of the Public Works Department and wishes to enter the Civil Engineering College for the purpose, I have no desire to prevent him from doing so, and accordingly I purpose accepting his resignation of the appointment of Sub-Overseer, from the 1st proximo, and would recommend that sanction may be granted for his admission into the College as a Military student after the same manner as was allowed in the case of Serjeant Watson, late Sub-Overseer, 1st Class, 3rd Grade, in the Presidency District.

In letter dated 19th February 1861, No. 10,078.

Proceedings of Government, dated 4th March 1861, No. 423.
Do. 16th April 1861, No. 761.

No. 234. ORDER THEREON, 21st September 1861, No. 1,771.

The Government accede to the recommendation of the Chief Engineer, but no College allowance will be granted to Corporal Flecknoe under the Order in the Military Department, dated 21st November 1860, No. 4,223, paragraph 1.

(Singed) C. G. MASTER,
Deputy Secretary to Government.

No. 235. Read the following letter from J. W. B. DYKES, Esq., Collector of Nellore, to J. D. SIM, Esq., Secretary to Government, dated Nellore, 5th September 1861, No. 41 :—

SIR,

1. I have lately received from the Chief Engineer a copy of the 1st, 2nd and 3rd paragraphs of the Proceedings of Government, under date the 14th June 1861, No. 1,096, in which the Government observe, that the rules for drawing funds for purposes connected with the Public Works Department, have been finally settled by their Order dated the 27th September 1860, No. 2,012. And, as I have not received a copy of this order, I have the honor to request that I may be informed, whether my not having received it, is intentional or an accident; in which latter case, I beg that I may be favored with a copy at an early date.

2. I ask this question because, with the order of Government above referred to, I have received from the Chief Engineer a Circular Extract from his Proceedings, under date the 22nd July 1861, No. XXX, circulating revised rules for drawing funds for Public Works, and, having received a letter from the District Engineer, with reference to the carrying out of these revised rules, I have thought it my duty to request that Officer to adhere for the present to the rules sanctioned by Government in this respect, under date the 30th September 1856. These rules are the rules we have hitherto been acting on. Till such time as I shall have received the orders of Government, authorizing me to depart from the rules so laid down for my guidance, I do not feel myself justified in adopting a different course. And, in requesting to be favored with the orders of Government, I trust that the course I have pursued in this matter will be approved of.

3. I would also take this opportunity of requesting, should the same not have been provided for, that, under the "revised rules," the payment of cheques by the village authorities may be permitted when convenient. The cheques being forwarded to the Táluq, with the usual monthly remittances, as so much money collected.

4. According to the present practice, Public Works' cheques can only be cashed at the Táluq and Huzúr Treasuries; and the result is, that the villagers have to send perhaps a thousand Rupees to the Táluq Treasury, to get the same entered as " collections," and then send to the Táluq Treasury to get the same money back again, as payment made by the Public Works Department for the repair of the village tank, or some other public works. And where considerable distances are involved, or the country to be passed through does not bear a good name, it apparently calls for some very strong objections to the proposed extension of cheques to justify the retention of the present roundabout and restricted system, viewed merely on general grounds. But there are further very strong special grounds for recommending that the village authorities may be authorized to pay cheques drawn on the Tahsíldár, where it is convenient that the cheques should be paid by them, and not at the Táluq Treasury; and these reasons I shall beg leave briefly to refer to, illustrating them by a case that came to my knowledge a day or two ago.

5. Even in England men prefer to be paid in coin rather than by a cheque, and there the cheque will perhaps be cashed by a banker in the same town, whose success depends, in no small degree, on the rapidity with which the wants of his customers are attended to and satisfied. It is the distance to go, however short, the break in the occupations of the day, and the uncertainty that must always attend transactions in paper, however good the name on it, that are felt as objections at home; and all of which points, I need scarcely urge, also enter into the calculations of the ryots, maistries, and others, who are required to execute public works in India. The distance is almost invariably greater than in England, if the cheque has to be cashed at the Táluq Treasury. Whilst, as regards the vast difference between the position of those on whom the cheque is drawn, it seems almost superfluous in me to bring this point to the notice of Government. The Tahsíldár instead of being a banker anxious to meet the wants of his customers, is the supreme authority of the Táluq, the Magistrate whom any ryot or maistry

would be loath to offend by his importunity, the Collector of revenue, who might possibly suggest that a cheque should be applied to the adjustment of out-standing arrears, and finally the Tahsíldár is an Officer whose time is much occupied, and who might very possibly be obliged to depute payment of cheques to subordinates, who have not a Banker's counter to pay across, nor the habits and feelings of those who make such payments at home. These are all facts so patent that I need not dwell on them, and I only bring them forward at length, as so many reasons in favor of allowing the village authorities to pay cheques, when convenient, instead of requiring, as at present, that all cheques should be paid at the Táluq Treasury; for all these objections disappear when the village authorities themselves pay the cheques; the money in reality never changes hands. Subordinates are saved much temptation. And the village choultry becomes in fact a "clearing house."

6. The case, which I referred to as having occurred the other day, is the repair of the tank at Kalavaya, a large village under the eastern gháts, with a tank giving a revenue of some 9,000 Rupees a year. A short time ago Lieutenant Smith informed me, that, owing to the dryness of the past season, this tank was so low that repairs might be executed to a sluice if he could only get the labor, that there might not be again an opportunity of executing for many years to come. I at once directed the Tahsíldár to assist him. It is an out-of-the-way place, Kalavaya. If the villagers chose, they could easily produce the requisite labor. If they did not choose, I knew the Engineer could not get it, and knowing under Lieutenant Smith's vigilant superintendence there was no fear that the people would not be paid for the work done, I had no hesitation in instructing the Tahsíldár to assist in carrying out what was so much to the interests of the villagers, and would probably have been done by themselves had they been one undivided village. But when Lieutenant Smith, on his return from Kalavaya, informed me two days ago in the course of conversation that the people had refused to take a cheque on the Táluq Treasury, the position of the case was much altered. I had no hesitation in bringing official influence to bear, so long as the people were paid in due course for the work done. If the people were not so paid, the course pursued was open to oppression. And probably in citing this instance of an influential village like Kalavaya refusing to receive a cheque on the Táluq Treasury, I am giving the strongest evidence in my power, that the system of paying cheques *in the Táluq Treasuries only,* is not what the Government would wish. Knowing the circumstances of a Táluq Kacheri, it is easy to see why the villagers object to receive a cheque on the Táluq Treasury. It is equally clear that they are placed in a very different position should they be compelled to take this cheque instead of being paid in hard coin. And it is equally clear how very different it would have been, could Lieutenant Smith have carried out the orders of Government, by giving the cheque to the village authorities to pay themselves. The estimate was for Rupees 2,570; and if Lieutenant Smith could have given a cheque for that amount, or so much of it as was due to the village authorities, the village authorities would have been saved sending money to that amount through a wild country and across the Pennair to the Táluq Treasury, the money would have passed through no hands, but their own. And I will venture to assert the execution of public works would have been viewed in a very different light by the villagers.

7. That this, I would respectfully submit, legitimate extension of the system of saving the remittance of treasure by granting cheques on the local revenues, would greatly facilitate the execution of public works, I have no hesitation in affirming. And, on the other hand, I am unable to see that there is any reason to fear danger thereby to the due collection and carrying to account of the public revenues. The village authorities if so disposed, would take the cheques in payment of the work done in their village, or in any other village, for which it was convenient to pay through them. They would forward the cheque to the Táluq, with their monthly remittance, of which perhaps it would be the larger portion, or perhaps the whole. And, in the Táluq, the cheques so received would be treated as if presented and paid there out of the money placed at the Engineer's disposal. The adjustment of the accounts would be simple. The remittance from the village would be thus made the safest possible, in so far as made in paper. And there would be no chance of the privilege being made subject to the abuses to be anticipated in the Táluq,

as those to whom the cheque was given would have the option of getting it cashed either in the village or the Táluq, an option they would occasionally avail themselves of, if not the village authorities themselves; whilst I would further recommend, that where desired, the Executive Engineers should be required to visit the Táluqs at certain times, and personally pay at the Táluq Kasbah all who preferred to wait for their money, and receive it direct from the Executive Officer rather than receive it through the village or Táluq authorities.

No. 236. ORDER THEREON, 23rd September 1861, No. 1,772.

1. The Collector of Nellore will be furnished with a copy of the Order of Government, dated 27th September 1860, No. 2,012.

2. The subject of the payment by the village authorities, of the cheques issued by Executive Officers in the Public Works Department, in part liquidation of their village remittances to the Táluq Treasury, will be referred for the opinion of the Board of Revenue, and of the Accountant General.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 237. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 11th September 1861, No. 4,766:—

1	Letter to	District Engineer,	12th	October	1860,	No.	5,809.
1	Do. to	do.	31st		,,	,,	6,472.
1	Do. from	do.	19th	Dec.	,,	,,	175.
1	Do. from	do.	29th	Jan.	1861,	,,	199.
1	Do. to	do.	8th	Feb.	,,	,,	9,738.
1	Do. from	do.	14th		,,	,,	216.
1	Do. to	do.	22nd		,,	,,	10,231.
1	Do. from	do.	4th	March	,,	,,	230.
1	Do. to	do.	5th	April	,,	,,	11,642.
1	Do. from	do.	10th		,,	,,	257.
1	Do. to	do.	20th	May	,,	,,	680.
1	Do. from	do.	6th	June	,,	,,	34.
1	Do. to	do.	28th		,,	,,	2,086.
1	Do. from	do.	5th	July	,,	,,	56.

See from District Engineer, 29th January 1861, No. 199.

SIR,

1. I have the honor to forward herewith a supplemental estimate amounting to Rupees (7,000) seven thousand, for completing the repairs to the Sampajee Ghát in the District of South Canara, the original estimate for which, amounting to Rupees 17,200, was sanctioned in Extract Minutes Consultation, dated 10th June 1856, No. 909.

2. Agreeably to the authority contained in the above orders of Government, the work was proceeded with by Lieutenant Johnson, the Executive Officer of Coorg, and the expenditure up to the period it was under that Officer's superintendence amounted to Rupees 7,563-10-1, leaving a balance of Rupees 9,636-5-11. The following is the quantity of work reported by the District Engineer to have been executed on that outlay, as ascertained by measurements taken at the time that Mr. Boesinger assumed charge of the District:—

	RS.
7 Miles jungle cleared...	350
3 Do. metalling unbroken	1,500
½ Do. completed	495
¾ Do.	742½
3½ Do. forming cross sections	350
12 Tunnels 2×2	240
6 Do. 4×3	300
Total... ...	3,977½

3. It appears, moreover, that the pay of Assistant Overseer Campbell, who had the immediate superintendence of the work, formed a heavy charge upon the estimate (being

Rupees 2,247 or 13 per cent.) for which no provision had been made therein. Captain Moberly reports that the only records that are forthcoming to show the manner in which the outlay above detailed had been incurred are accounts of *Labor* employed but none of material, and he is of opinion that a great portion of the difference Rupees 1,339-2-1, between the expenditure actually incurred by Lieutenant Johnson and the work found to have been done, is due to the money having also been expended on the line of road east of Mercára towards Fraserpett, for the repair of which the estimate did not provide, and where no measurements were taken by Mr. Boesinger.

10th April 1861, No. 257.

	7,563	10	1
	6,224	8	0
	1,339	2	1

4. The expenditure on the balance (Rupees 9,636-5-11) which remained on the transfer of the work to this Department, as reported in the Certificate of transfer furnished by Captain Moberly and Mr. Boesinger under the provisions of paragraph 7, Chapter XIX of the new Code, is Rupees 8,092-14-0, and the quantity of work executed, as measured, is reported by those Officers to be as follows :—

1st May 1859.

	RS.
7 Miles of jungle cleared...	350
$3\frac{1}{2}$ Do. of metalling broken.	1,470
$4\frac{5}{8}$ Do. completed...	$4,578\frac{3}{4}$
5 Do. forming cross sections.	500
7 Tunnels...	140
	$7,038\frac{3}{4}$

5. It will be observed from the papers now forwarded, that for some time past the amount allowed in the estimate, which, as above stated, was for the repair of the Sampajee Ghát only, and the maintenance allowance for the entire line had been expended indiscriminately, no separate accounts being kept under a misapprehension on the part of Assistant Overseer Campbell. Hence the difference between the actual expenditure incurred since the transfer, viz., Rupees 8,092-14, and the quantity of work found to have been executed on measurement, Rupees 7,038-12, and which was taken only on the Ghát.

Rupees 17,200.

Rupees 10,525, entered in the Budget No. 3.

6. Mr. Assistant Overseer Campbell, now at Madras, informs me that what he did on the Coorg portion was under the instruction of Captain Johnston, Executive Engineer South Astragram, who also directed him to debit the expenditure against the metalling estimate.

7. On receiving a copy of the estimate however, (in obtaining which there was some delay) Mr. Boesinger, the Sub-Engineer, discovered the error, which he then rectified by keeping different accounts of the two sums at his disposal.

	RS	A.	P.
No. 43 of 1857-58	6,000	0	0
" 63 of 1858-59	4,409	9	4
" 10 of 1859-60	1,563	10	1
" 11 of do.	759	0	6
	12,732	3	11

8. The Bills in this Office exhibit an expenditure of Rupees 12,732-3-11, and the subsequent outlay up to the end of January 1861, the time up to which the expenditure was calculated in the Certificate of transfer, was Rupees 2,924-4-2, making a total of Rupees 15,656-8-1, which tallies with the entries in that certificate. The expenditure between the 1st and 19th February 1861, the latter being the date on which the work was stopped, was Rupees 77-11-1.

	RS.	A.	P.
Prior to transfer.......	7,563	10	1
Since do	8,092	14	0
	15,656	8	1

9. The supplemental estimate* now submitted, provides for completing the metalling of the Ghát as follows:—

* Rupees 7,000.

				RS.
5 Miles metalling at		Rupees 1,200	per mile..................	6,000
5 Do. road forming at		" 40	do......................	200
2 Tunnels	at 4 × 3 feet at	" 50	do......................	100
31 Do.	at 2 × 2 do. at	" 20	do......................	620
				6,920
			Superintendence...	80
				7,000

10. The balance of the original estimate of Rupees 17,200, *viz.*, Rupees 1,468, is made available in the Budget of the current official year, and this sum the District Engineer reports will enable him to complete the Ghát working upwards as far as Madynád close to 5th mile stone, counting from Mercára towards Sampajee. With this explanation I beg to recommend that the amount of the supplemental estimate, Rupees 7,000, may be sanctioned out of the reserve fund of 1861-62, provided that on the re-distribution of all the available funds as directed in the Government Order, No. 1,644, dated 26th August 1861, it be found practicable to make such a grant from this fund, in order to admit of the completion of the Ghát, the great importance of which has already been recognized by Government.

29th January 1861, No. 199.

11. The District Engineer explains that the comparatively small sum, *viz.*, Rupees 80, entered for superintendence will suffice, as it will provide an Assistant Maistry for eight months on 10 Rupees a month, and any additional supervision that may be required will be afforded by the establishment kept up on the maintenance grant of Rupees 100 per mile on the Sampajee Ghát—*Vide* Extract Minutes Consultation, No. 7, dated 4th January 1854.

12. The question of handing over this Ghát and that of Perambady as far as they lie within the Coorg limits, which the Chief Engineer of Mysore has lately revived, was laid before Government in my letter, No. 4,626, dated 5th September 1861.

No. 238. ORDER THEREON, 23rd September 1861, No. 1,773.

The proceedings of the local Officers in carrying out the original estimate for repairs to the Sampajee Ghát, as brought to notice in this letter, are very unsatisfactory; but under the circumstances, the Government grant authority for completing the repairs at a further outlay of Rupees (7,000) seven thousand; this amount to be obtained, if practicable, from the reserve fund of the current year, as proposed in paragraph 10.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 239. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th September 1861, No. 4,677 :—

SIR,

1. With reference to the Orders of Government, No. 2,059, dated 4th October 1860, I have the honor to submit a further account up to the 31st July last, of the advances, &c., made by the District Engineers of the Godavery and Presidency, on account of the two batches of Stone Cutters who were shipped from this Presidency for employment on the Alguada Reef Lighthouse works.

2. This account shows a balance of Rupees 3,723-15-10 to be due to the District Engineer Godavery, and that of Rupees 4,678-13-6 to the District Engineer Presidency, but from the former of these sums must be deducted Rupees 1,882, and from the latter Rupees 3,652-5-6, which the Accountant General has already been instructed in the Orders marginally quoted to cause to be re-paid to this Department. Orders are now requested for the Accountant General to authorize the re-payment of the difference of the balances, viz., 1,841-15-10 to the District Engineer Godavery, and Rupees 1,026-8-0 to the District Engineer Presidency.

	RS.	A.	P.
GODAVERY.			
O. G. No. 1,454, dated 3rd August 1861	1,882	0	0
PRESIDENCY.			
O. G. No. 1,121, dated 18th June 1861......	602	0	0
" " 1,454, dated 3rd August "	3,050	5	6
	3,652	5	6

No. 240. ORDER THEREON, 23rd September 1861, No. 1,774.

1. Ordered that copies of this letter and of its enclosure be transmitted to Captain Fraser, Superintendent of the Alguada Reef Lighthouse, with reference to his letter, dated 20th August 1860, and in continuation of the Order of Government, dated 21st March 1861, No. 576.

DISTRICT ENGINEER GODAVERY.

	RS.	A.	P.
Balance as per Chief Engineer's letter..	1,841	15	10
Amount, the adjustment of which has already been authorized........	1,247	0	0
Balance....	594	15	10

DISTRICT ENGINEER PRESIDENCY.

Balance as per Chief Engineer's letter..	1,026	8	0
Amount, the adjustment of which has already been authorized., ...	526	8	0
Balance....	500	0	0

2. The Chief Engineer requests that the repayment of the sums of Rupees 1,841-15-10 and Rupees 1,026-8-0 to the District Engineers of Godavery and the Presidency respectively, may be authorized. The necessary authority has already been granted for portions of these sums in the Order dated 13th September 1861, No. 1,721. The Accountant General will be instructed to pay to the District Engineers alluded to, the balances of Rupees 594-15-10 and Rupees 500 as shown in the margin, and to debit them to the Government of India.

3. The Government are of opinion that two sets of accounts for these advances are unnecessary and likely to create confusion. The accounts up to July last, having been adjusted, the Chief Engineer will include in his monthly lists of payments made to the families of the Stone Cutters from August 1861, other charges which may be incurred on account of those men during each month, so that a monthly adjustment may be ordered. The account current of the description submitted with Colonel Horsley's present letter may be discontinued.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

Ordered that the following letter be despatched.

No. 241. From C. G. MASTER, Esq., Deputy Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 23rd September 1861, No. 1,775.

SIR,

* From Chief Engineer, 6th September 1861, No. 4,677.
Procs. of Govt., dated 23rd „ „ „ 1,774.

	RS.	A.	P.
District Engineer Godavery	594	15	10
„ „ Presidency..................	500	0	0
Total....	1,094	15	10

In transmitting copies of the papers noted in the margin,* I am directed to state for the information of the Government of India, that the Governor in Council has directed the amount of Rupees 1,094-15-10, being the balance of charges incurred on account of the labourers sent to the Alguada Reef Lighthouse up to 31st July last, to be debited to that Government. I am to request that a corresponding credit may be given.

No. 242. Read the following letter from R. COLE, Esq., M. D., Principal Inspector General Medical Department, to J. D. SIM, Esq., Secretary to Government, dated Fort Saint George, 18th September 1861, No. 145:—

SIR,

Public Department, No. 1,742, dated 17th instant.
Telegram herewith returned.

1. I have the honor to report for the information of His Excellency the Governor in Council, that in obedience to Proceedings of Government and Order thereon marginally noted, I have instructed the Deputy Inspector General Northern Division, by Telegraph, to Despatch two Second Dressers forthwith, to place themselves under the orders of the Medical Officer employed

on the Upper Godavery, and two more will be directed by letter to be sent to the same locality without loss of time. Medical Subordinate will be sent from Madras by the first steamer to the Northern Ports to replace the above, from among those recently admitted into the public service, under the denomination of Hospital Assistants.

2. The Indent for Medicines by Assistant Surgeon Houston, for the use of the employés on the Godavery, will be forwarded to the Deputy Inspector General Northern Division for supply, in such quantities as he deems right. The Country Medicines, Liquors and Hospital necessaries required by Doctor Houston, by the new rules in such matters, cannot be obtained as formerly by indent on the Commissariat, but, as in the case of Civil Hospitals, should be procured by contract, if possible, or by purchase in any convenient mode, from the funds assigned for the Godavery works, no provision having been made in the estimates and Budget of this Department to meet such outlay.

No. 243. ORDER THEREON, 23rd September 1861, No. 1,776.

Ordered to be communicated to the Chief Engineer, with reference to the Proceedings of Government, 17th instant, No. 1,742.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 244. Read the following Memorandum from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th September 1861, No. 4,997 :—

The Chief Engineer has the honor to inform the Secretary to Government, Public Works Department, with reference to Proceedings, No. 1,718, dated 13th instant, that the deputation allowance of Rupees (50) fifty per mensem, recommended in the last paragraph of his letter No. 4,535, dated 2nd September 1861, to be given to Overseer Howell, was intended to be granted to Overseer *O'Neill*,* who is the subordinate officiating in Mr. Arnold's charge, viz., the Podatúr Range in the Cuddapah District. By an oversight the name of *Howell* was inserted instead of that of *O'Neill*. It is therefore requested that the necessary corrections may be made in the Chief Engineer's letter, and Proceedings of Government quoted above, and that intimation thereof may be given to the Civil Auditor, to whom a copy of this Memorandum will in the meantime be forwarded.

* *Vide* paragraph 6 of Chief Engineer's letter to Government, No. 3,298, dated 30th July 1861.

No. 245. ORDER THEREON, 24th September 1861, No. 1,777.

Ordered accordingly that the name of Overseer O'Neill be substituted for Mr. Howell, in paragraph 2 of the Order of Government, dated 13th September 1861, No. 1,718.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 246. Read the following Proceedings of the Madras Government in the Military Department, dated 12th September 1861, No. 3,211 :—

Communicating to the Provincial Commander-in-Chief, the Chief Engineer's letter stating that his Department has nothing to do with the works at Secunderabad. } Vide Military Proceedings, 12th September 1861, Nos. 243-244.)

No. 247. ORDER THEREON, 24th September 1861, No. 1,778.

Ordered to be communicated to the Chief Engineer for information with reference to his letter of 7th instant, No. 4,702.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 248. Read the following Proceedings of the Madras Government in the Military Department, dated 11th September 1861, No. 3,203 :—

Communicating to the Provincial Commander-in-Chief, correspondence relating to certain improvements proposed to the Powder Magazines at Malliapooram and Calicut in Malabar. } Vide Military Proceedings, 11th September 1861, Nos. 225 @ 228.)

No. 249. ORDER THEREON, 24th September 1861, No. 1,779.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter and endorsement, dated respectively 13th August and 6th September, Nos. 3,843 and 4,666.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 250. Read the following Proceedings of the Madras Government in the Military Department, dated 11th September 1861, No. 3,199 :—

Approving the estimate for certain alterations and improvements to the buildings occupied by the Horse Battery at Cannanore in the Malabar District. } Vide Military Proceedings, 11th September 1861, Nos. 210-211.

No. 251. ORDER THEREON, 24th September 1861, No. 1,780.

Ordered to be communicated to the Chief Engineer, with reference to his letter, dated 20th August last, No. 4,091.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 252. Read the following Proceedings of the Madras Government in the Military Department, dated 16th September 1861, No. 3,274:—

Approving the estimate for removing and re-building the demi-gorges, and repairing the cazemates of the bonnette in front of the Saint Thomé ravelin of Fort Saint George. } Vide Military Proceedings, 16th September 1861, Nos. 347-348.)

No. 253. ORDER THEREON, 24th September 1861, No. 1,781.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter of the 6th instant, No. 4,686.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 254. Read the following Proceedings of the Madras Government in the Public Department, dated 20th September 1861, No. 1,333 :—

Passing orders on the Memorandum of the Inspector General, Medical Department, with respect to certain sanitary and Medical arrangements of the Neilgherries. } Vide Public Proceedings, 20th September 1861, Nos. 80 @ 82.

No. 255. ORDER THEREON, 24th September 1861, No. 1,782.

Ordered to be communicated to the Chief Engineer for report, with reference to paragraph 5 of the Order.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 256. Read the following Proceedings of the Madras Government in the Judicial Department, dated 20th September 1861, No. 1,184 :—

Read the following Proceedings in the Military Department, dated 11th September 1861, No. 3,175.

Read the following papers :—

Memorandum from the Deputy Adjutant General of the Army, Fort Saint George, 7th September 1861, No. 360.

The Provincial Commander-in-Chief has the honor to forward the accompanying letter and enclosure from the Officer Commanding Northern Division, reporting the retention of the Military Guard over the Treasury at Chicacole, in consequence of the Principal Assistant Collector not considering it prudent from the insecure state of the building to entrust the keeping of it to the small party of Police allotted for its protection.

From the Officer Commanding Northern Division, Head Quarters, Waltair, 24th August 1861, No. 205, to the Adjutant General of the Army, Ootacamund.

The Principal Assistant Collector Ganjam having addressed the Superintendent of Police to the effect, that he does not consider it would be prudent in the present insecure state of the Treasury building at Chicacole, to entrust the keeping of it to the small party of Police allotted for its protection, I have the honor, for the information of the Provincial Commander-in-Chief, to report that under the circumstances, I have directed the Officer Commanding Chicacole to continue the Military Guard over the Treasury so long as the Civil Authorities deem it necessary, and beg to enclose true copy of letter from the Assistant Collector to the Officer Commanding Chicacole on the subject.

From the Principal Assistant Collector Chicacole, 16th August 1861, No. 221, to the Officer Commanding Her Majesty's 31st Regiment or T. L. I., Chicacole.

In consequence of the insecure state of the Treasury here, I have addressed the Superintendence of Police to the effect, that I do not think it would be prudent at present to remove the Military Guard. The windows are in such bad repair and are so easily accessible from outside that it is considered necessary to keep the door of the Treasury open and a Sentry inside. It would not be safe to entrust the keeping of such a Treasury to the small party of Police allotted to this work, especially as the men are all newly enlisted, and there has been no opportunity yet of testing their honesty. It is intended to commence the erection of a new Tahsíldár's

Cutcherry at Chicacole, which will include a Treasury, and this is the reason why it has not been thought worth while to incur the expense of repairing the present Treasury. The new building will be commenced directly the rains are over,—and I have written to the Collector requesting him to urge on the District Engineer to push forward the work as quickly as possible.

Approved.

(True Extract.)

(Signed) R. HAMILTON, Lieut.-Colonel,
Deputy Secretary to Government.

Communicated to the Inspector General of Police, and to the Public Works Department.

(True Extract.)

(Signed) W. S. WHITESIDE,
Acting Deputy Secretary to Government.

No. 257. ORDER THEREON, 25th September 1861, No. 1,783.

Ordered to be communicated to the Chief Engineer.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 258. Read the following Proceedings of the Madras Government in the Educational Department, dated 23rd September 1861, No. 19:—

Read the following letter from A. J. ARBUTHNOT, Esq., Director of Public Instruction, to the Secretary to Government, dated Kúnúr, 7th September 1861, No. 1,687.

SIR,

1. I have the honor to acknowledge the receipt of the Proceedings of Government, under date the 28th and 31st ultimo, Nos. 1,244 and 1,259, calling upon me to state whether certain charges, which it is proposed to incur in removing the Pottery kilns in the premises of the School of Industrial Arts to another site, and in raising Dr. Hunter's salary to Rupees 1,000 per mensem, from the date of his promotion to the rank of Surgeon.

2. Both these charges can be met from the sum allotted for the expenditure of the Educational Department. The cost of removing the Pottery kilns, Rupees 560, can be defrayed out of the sum provided for the erection of a School-house at Chittoor, which will not be required during the present official year; and for the increase to Dr. Hunter's salary, the salary of a Master of a Mufassal school (Rupees 500 per mensem), whom the Secretary of State was requested to send out last year, but who cannot now arrive until the beginning of next year, is available.

3. I send a copy of this letter to the Accountant General.

1. Communicated to the Public Works Department.

2. The increase to Dr. Hunter's allowances will be provided for out of the sanctioned grant as suggested by the Director of Public Instruction.

(Signed) W. S. WHITESIDE,
Acting Deputy Secretary to Government.

No. 259. ORDER THEREON, 26th September 1861, No. 1,784.

Ordered to be communicated to the Chief Engineer.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

Read the following papers :—

No. 260. From Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secertary to Government, dated Chepauk, 17th July 1861, No. 2,773 :—

11 Letters as noted below with five plans, with seven enclosures and four abstract estimates.

* 5th June 1860, No. 1,167.
15th do. „ „ 1,256.
13th April 1861, „ 757.

† From	District Engineer,	24th December 1860, No. 284, with two enclosures.	
Do.	do.	24th do. 1861, No. 285, with five enclosures.	
Do.	Auditor of P. W. Accounts,	15th Feb. 1861, No.	1.
Do.	District Engineer,	25th „ „ „	371.
Do.	do.	13th March „ „	395.
Do.	do.	19th „ „ „	404.
To	do.	21st „ „ „	11,182.
From	do.	28th „ „ „	418.
To	do.	3rd April „ „	11,583.
Do.	do.	13th do. „ „	11,950.
From	do.	5th June „ „	41.

SIR,

1. With reference to the Orders of Government as per margin,* I have the honor to submit the accompanying correspondence† relative to the works proposed for the improvement of the Port of Negapatam in the Tanjore District, comprizing also a report on the subject by the Committee appointed by Government in their Proceedings dated 5th June 1860, No. 1,167.

2. The Committee at the outset of their report advert to the fact, which the experience of the past year has proved, that the present condition of the Port of Negapatam is such that a gale of wind from seaward, or a heavy river flood may, by removing the mouth 700 yards to the south, render it valueless as a Port for many months, until by an outlay of about Rupees 5,000 its present mouth is restored and the water brought again in front of the wharf and godowns. The mouth of the harbour, moreover, is represented to shift irregularly over 150 or 200 yards distance, simply by the action of the waves and currents. The ordinary depth of water at low-tide is about 3 feet, but at times, there is so little water, that it is found necessary to drag even empty boats over the bar.

3. The shifting of the mouth northward has been checked by the jetty, erected a little to the north of the Sea Custom House, and the Committee propose, that to this point, the mouth should be restricted, as thereby advantage could be taken of the present jetty and the wharfage ground already gained within the Port, whilst much expense would be saved, which would otherwise have to be incurred, that is, if the river mouth were taken further northward. With a view to carry out that object, and to maintain a minimum depth of water at the bar, of not less than six feet at low water, which will admit of the passage of ordinary cargo boats at all times, of laden dhonies of considerable tonnage, and of unladen vessels being brought into the river, for the purposes of repair at high water, the following measures are proposed.

	REMARKS.
1. Training walls or Piers carrying the river's mouth out to sea about 30 yards beyond the coast line as shown on Plan C.	1. The existing north jetty or training wall is to be used, and an additional 110 yards of wall added. That on the south will have to be built about 100 yards long, the distance between the north and south walls being 80 yards. The new walls are to consist of a double row of piles, with large stones thrown into fill the interval.
2. A strong earthen embankment running from the base of the southern training wall southward, along the spit of sand which extends some 1,460 yards in length between the river and sea.	2. The erosion of the north end of the spit by the action of the north-east monsoon has the effect of widening the mouth continally, and in November last the width of the river at high water mark was increased from about 58 to about 144 yards. The earth embankment along the spit for which the requisite materials are obtainable, is to be six yards wide at top and planted throughout with various descriptions of marine shrubs.
3. Small groynes on both sides of this spit to protect it from encroachments by the sea on one side, and river floods on the other.	

The Collector considers that this most important part of the project should be carried out at once.

4. Widening the river on its west side at the bend near the Government school, and thus lessening the set of the current against the opposite spit in times of heavy floods.

5. Enlarging the basin to receive tidal water.

It is not proposed to incur at present any expense in enlarging the basin to receive tidal water, beyond cutting away the portion of ground colored yellow in plan, and generally deepening and clearing the channels, by means of a dredge or otherwise.

4. The Committee remark that for the further improvement of the Port, by diverting into it the drainage of a larger area of land than it now receives, it will be necessary to widen and deepen the Vellayar cut, and throw a masonry dam across the Vellayar, near Valenganny (a project which was long ago recommended by Lieutenant-Colonel Lawford, but violently opposed by the neighbouring Mirásidárs, who apprehended that their fields would be swamped, and also that the navigation of the Vellayar would be dispensed with), and erect a large bridge on the road to Tritapúndi; but as these works will entail a heavy outlay, they are simply adverted to by the Committee to be undertaken hereafter, should a greater scour be found desirable.

5. The Committee recommend that the Government lands between the Railway station and the river on the south, which could probably be made available for wharfs and merchant's godowns, should be let out, and a fund secured thereby to be devoted to the improvement of the Port.

6. Though a member of the Committee, the Collector whilst acquiescing generally in the measures proposed, expresses his disapproval of the proposition to have training walls of equal length, and at right angles to the line of coast, as the safety of boats entering into such passage would be imperilled by the resistance which the surf between the two heads would offer, and he is of opinion therefore that advantage of the tidal scour could be more fully realized by running the northern wall in a north-easterly direction or in the direction of the monsoon, in which the tides are highest, and by the southern training wall being shorter by 25 yards, and of less height than the northern one, and rounded off, partaking more of the nature of a low groyne than of a pier. By the latter arrangement he conceives there would besides be less tendency for the deposit of sand than between piers of equal length.

In Memorandum accompanying District Engineer's letter, 24th December 1860, No. 284.

7. The District Engineer in reporting on the Collector's Memorandum, remarks that the suggestions therein made would, if attended to, have the effect of causing a shifting of the bar during the monsoon, and of diminishing the depth of water over it. Captain Oakes adds, that when the north jetty has been built, as proposed, thirty yards beyond high-water mark, it would be then practicable to ascertain with some correctness whether the extension of the south jetty to the same distance, would render the entrance to the harbour dangerous during the north-east monsoon, and if so, to reduce its length eighteen yards, so that it may extend beyond high-water mark as far as the groynes which protect the spit of sand. Captain Oakes also states that the danger to boats would be increased considerably if the southern jetty is to consist of large loose boulders of stone, which besides would need constant repair. Our experience at Cocanada, however, does not lead me to think that any danger need be apprehended for this source.

8. Plans and estimates, amounting in the aggregate to Rupees 1,08,100, for carrying out the works proposed by the Committee, are herewith forwarded, and detailed particulars thereof

will be found given in District Engineer's letter of the 24th December 1860, No. 285. The estimates are accompanied by a Memorandum of the probable* cost of a sea wall to separate the sea and river effectually and permanently.

* Rupees 1,54,000.

9. The several papers which have been summarized above, were referred for the report of Colonel Lawford whilst at Madras, who was of opinion that the Committee did not enter sufficiently into the subject. That Officer pointed out, that no information had been furnished with respect to the probable future traffic of the Port of Negapatam, and the consequent necessity of rendering it as convenient as possible. Colonel Lawford approved of the works proposed, so far as the extension of the north jetty was concerned, but he preferred its being carried out "in prolongation of the old work or "in a north-east direction, as the bar will then be less likely to close from an extension of the "southern sand spit." He demurred to the necessity of a training wall on the south, and of a mud bank along the sand bank between the river and sea; but proposed, instead, a strong piling along the weakest parts of the bank or for about 400 yards, and a bulwark of rough stone. Colonel Lawford was of opinion, however, that none of the above works could prove of much value, unless the river be cleared of shoals.

15th February 1861.

5th June 1861, No. 41.

10. In reference to these observations the Committee remark, that they did not consider it necessary to enter into any explanation of the importance of improving the harbour, seeing that that has already been admitted by the Government, and that whilst the value of the exports and imports of the Port were upwards of 13 and 15 lacs respectively, and it was about to become the terminus of the Great Southern of India Railway, a laden Massula boat cannot enter at low-water. The Committee add also, that it is not proposed to alter the direction of the existing jetty, but that the new work is to be thrown back only 9 feet to admit of the old work being made use of as a footing for the new. The southern training wall they consider to be indispensably necessary, to maintain a depth of 6 feet of water over the bar at low-water, which cannot be effected if the mouth of the river is permitted to shift. The Committee acquiesce in the expediency of erecting a piling, to secure the spit of sand between the river and the sea, but the embankment of earth was proposed on the ground of economy, whilst its effects would be nearly as certain in securing the spit. They concur in the necessity of clearing the channel of shoals for which a dredge is applied for.

11. The Committee forward a statement showing the shipping belonging to the Port, and the value of imports and exports, and the duty collected during the past ten years, and remark that some difficulty is experienced in determining the probable increase of imports and exports after the opening of the Great Southern of India Railway as that must depend so greatly on the extension, or otherwise, of the Railway, to the west of Trichinopoly. The Railway Chief Engineer has however been requested to furnish information on that point.

12. Should the sea deepen rapidly beyond the bar, indicating a set of the ocean current (varying with the two monsoons) along the coast, parallel training walls of equal lenth would certainly have great effect, as the deposit made by the loss of the velocity in the stream outside of them would be removed by the current along the coast, but if on the contrary the water is shallow for some distance out, the training walls would probably only alter the position of the bar, and not increase the depth of water over it. If the southern training wall is shorter than the northern training wall, there will be a tendency to deposit sand when the southerly winds blow; the tide will remove some portion of it seaward, and it is possible the accumulation on the bar will be increased, and consequently the depth of water decreased, but the remainder unless a dredge is constantly at work will cause great obstruction to boat traffic.

13. My own opinion, therefore, is quite in favor of constructing both the northern and southern training walls. I would continue the former on the general line of the last *long reach* of the jetty already built, removing, if necessary the dotted portion '*g*' or at any rate working off to the north-east from its termination, if considered advisable, and construct the southern

training wall of equal length, either parallel with it, or in such a direction as would seem best. I myself think it should be rounded off towards the south-east, but the occurrence of sandy and other deposits at the mouths of Indian rivers, is a very intricate question, and as there is little or nothing known of the law which governs the formation, no system can be established to check their ill-effects.

14. The groynes, both those in the sea and those in the river, appear to be an essential part of the scheme, and not less so is the cutting away of the left bank of the river marked yellow.

15. The character of dividing spit between the sea and the river, suggested by Colonel Lawford, is by all parties allowed to be preferable to that suggested by the Committee, but economical motives alone guided the latter in their recommendations, and under present exigencies we must, I believe, be satisfied with it.

16. The most important perhaps of all the Committee's recommendations is the proposed increase eventually of the tidal basin; upon this so greatly depends the realization of the results, which are looked for in carrying out the other works, that I feel disposed to think that a considerable sum of money should be allotted to it, and for this purpose I have added 50,000 Rupees to their estimate.

17. My recollection of Negapatam and its neighbourhood enables me to state that there are peculiar facilities in the presence of a large surface of waste lands, for opening new channels, for receiving tidal-water, and if these were dug and works partly self-acting placed at their mouths, whereby the discharge from them might be regulated so as to prolong the "ebb-tide," I think a manifest advantage would arise. The excavated soil might be used as proposed by the Committee in paragraph 24. Amongst other channels the cut from the Vellayaur may be widened and deepened, and a canal might be formed uniting the ports of Nagore and Negapatam.

18. The masonry dam suggested by the Committee to be at some future day thrown across the Vellayaur near Valungunney. It was, as before stated, originally proposed by Lieutenant-Colonel Lawford, but the Mirásidárs of the lands above, and the persons interested in the Vallayaur navigation, opposed its construction so strongly that it became necessary to abandon the project.

19. The Committee's suggestions as contained in paragraphs 27 and 28 and above adverted to in paragraph 5, should, I think, be acted upon at an early date.

20. On the whole I beg to support the recommendations of the Committee and to forward for the approval of Government, and the sanction of the Secretary of State for India, the estimate amounting to 1,58,100 Rupees.

No. 261. Endorsement of the Chief Engineer, dated Chepauk, 22nd August 1861, No. 4,205 :—

From Captain R. F. OAKES, District Engineer, to the Deputy Chief Engineer, Southern Circle, dated Tranquebar, 6th August 1861, No. 101.

SIR,

1. I have the honor to inform you that on the morning of the 2nd instant, I inspected the harbour at Nagapatam.

Extract Proceedings, No. 10,239.

2. The underpinning and repairs to the face of the jetty, sanctioned on the 22nd February last, appear to have been carried out satisfactorily.

3. The harbour has silted up very considerably of late, and the depth of water along the jetty from Z to Y which used to be from 10 to 14 feet, now averages only 6½ or 7 feet at high water.

4. The bar has shifted considerably to the south since February last, as the enclosed sketch will show, and the sea has encroached on the high sand hills at W. V., showing clearly that the construction of the southern groyne, proposed by the Committee in their report,* is absolutely necessary to prevent the position of the bar from shifting beyond prescribed limits, and to secure the full advantage of the current during flood and ebb tides, acting upon the same or nearly the same spot in the bar.

* Forwarded with letter No. 284, dated 24th December 1860.

5. The sand embankment on the spit which divides the river from the sea has been much augmented in size since my last visit,† by the shifting sands which have been arrested by the palisades erected along it for that purpose, and the prickly pear planted along it has taken root, and will probably soon spread over and protect it.

† In February.

6. The groyne constructed in November 1860 for protecting the sand spit from the encroachment of the river has been very effective, and the depth of water to the north of the groyne along the spit has been reduced considerably; but I do not regard the spit as safe, and a third groyne is much required about 120 yards further north than the one constructed in November last; for this an estimate was submitted with letter No. 418, dated 28th March, but was returned with Chief Engineer's Proceedings, No. 11,950, dated 13th April 1861, and has not again been submitted, partly because the material I calculated upon had been used on the groynes at Tranquebar, and partly because on a reference to the Executive Officer, I learnt that the bank was not in so precarious a condition as I anticipated.

Submitted for the information of Government in continuation of Colonel Birdwood's letter No. 2,773, dated 17th July 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 262. MINUTE BY THE HONORABLE THE PRESIDENT.

1. I have looked over the papers relating to the improvement of the harbour of Negapatam, and the following remarks will explain my view of the best course to adopt for the purpose of securing a moderate depth of water over the bar; more it would be impossible to obtain without the expenditure of a larger sum than the importance of the harbour would warrant.

2. The three rivers which combine to find an outlet at Negapatam do not bring down a sufficient body of water to make an effective scour, and the rise of tide is too small to allow the ebb to act upon the sand which the sea brings in: the consequence is that the prevalence of southerly winds forces the outlet of the river more and more to the north, and would continue to do so, under ordinary circumstances, did not an occasio nal heavy flood during the monsoon cause the river to break through the sandy beach between it and the sea, at a point some short distance to the southward of the present opening. It would have been comparatively easy to maintain an opening in the direct line of the course of the river; but I suppose that buildings have been erected, and interests sprung up, which makes it desirable to adhere to the present course of the stream.

3. In order to this, then, it will be necessary to strengthen the bank opposite to the line of the river, and this may be done, to the side of the sea, by running out as proposed short groynes, which will collect the sand to seaward, and thus form a defence against the action of the north-east monsoon; but this would not be sufficient without a corresponding defence against the action of the fresh water floods. I do not think that the groynes shown at (*d*) in plan C would be an efficient protection. The bank should be raised high enough to be above the highest flood level, and the face should be protected from the erosive action of the current, either with stakes wattled together and backed with stone, or piles, or fascines. I cannot of course point out the actual material to be used; that must depend upon local circumstances. The object should be to allow the current to run smoothly along the bank to deliver itself at the outlet.

4. Supposing then the spit of sand to be made secure, the next point to consider is the best mode of improving the entrance. Judging from the plans, I should say that, as the tendency of the wind is to force the opening to the north, which it can only do by drifting the sand into the mouth of the river, the simplest plan would be to keep the sand clear of the entrance by erecting a strong groyne to the *south* of the entrance, carrying it out some way below low-water mark and keeping it above high-water mark throughout its length. The effect of this would be to check the tendency of the mouth to silt up during the dry season of the year. This groyne may perhaps require some special protection during the north-east monsoon; it will have to be carried well into the bank, in order that the sea from the north-east may not cut round it, and its foot may need to be protected by loose stones; but this must be left to the Engineer on the spot. With reference to the work at the north of the entrance, I should not be disposed to do much. I do not think that it would be desirable to lengthen the existing jetty to any extent; all that is wanted is to give the flood water, or the ordinary river current, a set at right angles to the shore, to bring the existing jetty above high water, and to protect the back of it against the action of the north-east monsoon. There may be a tendency during this monsoon to silt up the mouth of the harbour, by sand drifted from the northward; but as there will probably be a heavy flood in the river at the same time, this will in all probability keep the channel clear. The substance of the work which I should recommend at present is as follows:

(1.) To raise the bank of the spit between the river and the sea.

(2.) To protect the face of this, so far as may be necessary, with some kind of work which will resist the action of the river flood.

(3.) To protect the sea face by a few groynes, not pushed out too far at first: they may be lengthened as required.

(4.) To carry out a longer groyne at the *south* side of the entrance of the harbour.

(5.) To rebuild the northern jetty, but not to extend it beyond the point where it terminated originally, filling in the back with stones or material capable of resisting the action of the north-east monsoon.

(6.) The groyne at the south side of the entrance should project *beyond* the jetty.

5. This is all that I should recommend at present; I should not attempt to meddle with the left bank of the river, or to enlarge the tidal basin. Should there be any great development of trade it may be desirable to make more extended arrangements for the accommodation of vessels; but this will be difficult and expensive on such a coast.

(Signed) W. T. DENISON.

No. 263. ORDER THEREON, 26th September 1861, No. 1785.

1. These papers relate to the improvement of the Port of Negapatam.

2. The three rivers which combine to find an outlet at Negapatam do not bring down a sufficient body of water to make an effective scour, and the rise of tide is too small to allow the ebb to act upon the sand which the sea brings in: the consequence is that the prevalence of southerly winds forces the outlet of the river more and more to the north, and would continue to do so under ordinary circumstances, did not an occasional heavy flood during the monsoon cause the river to break through the sandy beach between it and the sea at a point some short distance to the southward of the present opening. It would have been comparatively easy to maintain an opening in the direct line of the course of the river; but probably buildings have been erected, and interests sprung up, which make it desirable to adhere to the present course of the stream. The Chief Engineer will ascertain how far this is the case.

3. The present course being maintained it will be necessary to strengthen the bank opposite to the line of the river, and this may be done, to the side of the sea, by running out as proposed short groynes, which will collect the sand to seaward, and thus form a defence against the action

of the north-east monsoon: but this would not be sufficient without a corresponding defence against the action of the fresh-water floods; the groynes shown at (d) in Plan C would not be an efficient protection. The bank should be raised high enough to be above the highest flood level, and the face should be protected from the erosive action of the current, either by stakes wattled together and backed with stones, or by piles or fascines. The actual material to be used, must depend upon local circumstances: the object should be to allow the current to run smoothly along the banks to deliver itself at the outlet.

4. Supposing then the spit of sand to be made secure, the next point to consider is the best mode of improving the entrance. Judging from the plans, the Government consider that as the tendency of the wind is to force the opening to the north, which it can only do by drifting the sand into the mouth of the river, the simplest plan would be, to keep the sand clear of the entrance by erecting a strong groyne to the *south* of the entrance, carrying it out some way below low-water mark, and keeping it above high-water mark throughout its length. The effect of this would be to check the tendency of the mouth to silt up during the dry season of the year. This groyne may perhaps require some special protection during the north-east monsoon: it will have to be carried out well into the bank, in order that the sea from the north-east may not cut round it, and its foot may need to be protected by loose stones; but this must be left to the Engineer on the spot. With reference to the work at the north of the entrance, the Government are not disposed to do much. They do not think that it would be desirable to lengthen the existing jetty to any extent: all that is wanted is to give the flood-water, or the ordinary river current, a set at right angles to the shore; to bring the existing jetty above high-water; and to protect the back of it against the action of the north-east monsoon. There may be a tendency during this monsoon to silt up the mouth of the harbour, by sand drifted from the northward; but as there will probably be a heavy flood in the river at the same time this will in all probability keep the channel clear. The works then which the Government consider advisable at present are:—

(1.) To raise the bank of the spit between the river and the sea.

(2.) To protect the face of this, so far as may be necessary, with some kind of work which will resist the action of the river flood.

(3.) To protect the sea-face by a few groynes, not pushed out too far at first as they may be lengthened as required.

(4.) To carry out a longer groyne at the *south* side of the entrance of the harbour.

(5.) To re-build the northern jetty, but not to extend it beyond the point where it terminated originally, filling in the back with stones, or material capable of resisting the action of north-east monsoon.

5. The groyne at the south side of the entrance should project *beyond* the jetty.

6. The Government are not disposed at present to attempt any operations on the left bank of the river, or to enlarge the tidal basin. Should there be any great development of trade it may be desirable to make more extended arrangements for the accommodation of vessels; but this will be matter for future consideration.

7. The Chief Engineer will submit estimates for the works now approved, and will state from what source the necessary funds can be drawn.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 264. Read the following Proceedings of the Madras Government in the Judicial Department, dated 23rd September 1861, No. 1,197 :—

Allowing the Officers of the Madras Police a further extension for six months to enable them to pass the Vernacular test required of them. } (Vide Judicial Proceedings, 23rd September 1861, Nos. 142-143.)

No. 265. ORDER THEREON, 26th September 1861, No. 1,786.

Ordered to be communicated to the Chief Engineer.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 266. Read the following Proceedings of the Madras Government in the Public Department, dated 25th September 1861, No. 1,350 :—

Read the following letter from Lieutenant J. MITCHELL, Officer in charge of the Government Central Museum, to the Secretary to Government, Fort Saint George, dated Madras, 19th September 1861, No. 96 :—

SIR,

1. By Order, No. 923, dated 28th June 1861, Government sanctioned some very much wanted repairs to the temporary sheds and pens in the Zoological Gardens; all that has been done to the present date, is the removal of the Monkeys' Cage to prevent it falling upon the visitors.

2. On Monday morning last the somewhat heavy roof of the Bears' Den came down bodily (fortunately without doing any injury) I reported the circumstance to the District Engineer, and recommended that the sanctioned repairs should be at once executed.

3. To this Lieutenant-Colonel Hitchins demurs in consequence of the contemplated removal of the animals to the People's Park. If this could be done immediately, making repairs here would be only throwing away money ; but if Government were this day to order the erection of the necessary buildings in the Park, six months would be a short period to name as the time when they might be expected to be fit for use, and in the mean time what is to become of the animals. Something requires to be done immediately to prevent the animals escaping or their destruction by the monsoon, and I have the honor to solicit Government to be good enough to issue such orders as they may deem fit upon this subject, and I would beg to add as early as possible.

Orders will be issued in the Department Public Works for the early execution of the repairs directed, under date the 28th June last, to be made to the temporary sheds and pens in the Zoological Gardens.

(True Extract.)

(Signed) W. S. WHITESIDE,
Deputy Secretary to Government.

To the Public Works Department.

No. 267. ORDER THEREON, 26th September 1861, No. 1,787.

Ordered to be communicated to the Chief Engineer who will issue immediate orders to the District Engineer for the execution of the repairs in question.

(Signed) J. D. SIM,
Secretary to Government.

No. 268. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 25th May 1861, No. 861:—

SIR,

No. 2,521.
No. 53.

1. With reference to Proceedings of Government of 7th December last and 9th January following, forwarding certain papers connected with the proposal of the East India Irrigation and Canal Company to undertake the Irrigation of Orissa with other works, and directing me to obtain the opinions of Colonel Lawford and of any other Officer in the Department, whom it might be advisable to consult, I have the honor to inform you that I accordingly requested the several Officers, marginally noted, to favor me with their views on the subject.

From District Engineer Godavery.
Do. Colonel Boileau.
Do. District Engineer Nellore.
Do. District Engineer North Canara, with one enclosure.

Lieutenant-Colonel Lawford.
" Birdwood.
" Boileau.
Captain Walker.
" Chambers.
" Haig.
" Ryves.
" Stoddard.
" Greenaway.

2. Of these, replies have as yet been received from only four. Reminders have been sent to the rest, but as so long a time has already elapsed, I am unwilling to delay replying to the Proceedings of Government any longer.

Lieutenant-Colonel Boileau.
Captain Walker.
" Stoddard.
" Greenaway.

3. Before stating any opinion of my own, I will briefly summarize those first forwarded by the above mentioned Officers.

4. Colonel Boileau states his inability, from want of a knowledge of the locality, to offer any opinion on the proposed works.

5. Captain Walker considers, that though by executing the works themselves the Government would secure a larger revenue, yet that it has not now at its command the necessary Agency for superintending such an undertaking, and that it would not answer for Government to import such Agency from European countries, as considerable delay occurs before European Engineers can acquire that knowledge of the country, people, and language, besides acclimatization, each and all, so important to enable them to manage the minor but essential details of their operations. The risk attending such undertakings therefore, he considers should be left to private enterprize, and in the present instance where the Company hold no Government guarantee, and where many of its leading men are, or have been connected with India, and can command the best advice to be had on irrigation works, he deprecates the idea of any professional supervision or interference with the design and execution of the Orissa works, but recommends that a Revenue Officer should be attached to the scene of operations for the special purpose of making over all the requisite land, for awarding compensation, and as soon as water is provided, for acting on behalf of Government, both to the Company from whom it is purchased, and the cultivators to whom it is supplied.

6. He would also, in order to obviate delay, leave the question of tolls for future adjustment, instead of attempting to define them by a preliminary act, insisting only on due provision being made by the Company for conveying all public communications, existing or future, across their Canals, as their own interests will lead them to adopt the lowest tariff consistent with a reasonable profit, and that, as no guarantee is given, so no trammels need be imposed.

7. Captain Walker concludes with suggesting that though Officers of Engineers could not be spared to assist in these works, yet that it would be very desirable that arrangements should be made to enable younger Officers to take advantage of the opportunities for practical study which they will afford, and that it would be a mutual benefit to both the Company and the Government if a stipulated number of the Assistants on the works were appointed from the Corps of Engineers, those fitted for the rank of a senior Assistant by previous service on Government works being paid by the Company, who will profit by their local knowledge, while the junior Assistants are maintained at the cost of Government, to whom it should be an object that such an extensive school for acquiring practical knowledge should not be entirely lost to their own Engineers.

8. Captain Stoddard does not enter into any particulars, but only states his opinion "that "the terms offered by the Secretary of State in Mr. Baring's letter of the 2nd June 1860, are "such as, if impartially carried out, would leave nothing to be desired to make the specula- "tion profitable to the country, advantageous to the Government, and productive of vast benefits "to both India and England."

9. After his own experience on the Godavery, where works commenced fifteen years ago have not yet been completed, owing to the repeated restrictions on expenditure, he does not hesitate to decide on the Orissa project being committed to a Corporation possessing such public confidence, and commanding so much capital, as their own interests would lead them to prosecute the undertaking to a speedy completion.

10. Captain Greenaway, who enters with more minuteness into the subject, considers first, that it is a matter of regret that the works are not undertaken by the Government, who, he is of opinion, would execute them with more despatch and economy than a private Company, but if this be not possible, that then every facility should be afforded to any private parties willing and able to execute works so advantageous to the Government and to the country.

11. Captain Greenaway also considers that the conditions both of construction and subsequent management should be clearly and unmistakeably defined *before* the work is commenced, but *once* arranged, the less interference that is exercised while the works are in progress, the better for all parties.

12. To the first* condition proposed by the Secretary of State, he would add that an opening be left for the introduction of such modifications, which meet with mutual approval, and may appear necessary as the works begin to be developed.

* That the works be constructed on Plans approved by Government.

13. To the second proposition, regarding payment for land to be taken up, he states that such land should be valued at once at its present value, as it would be unfair to charge the Company with the enhanced value which will be entirely due to, and be the effect of the works themselves.

14. To the third proposition, that the water-rate should be previously fixed by an Act of the Indian Legislature, he recommends that all water should be sold by measurement at a fixed unit of one cubic foot per second for 50 acres of rice cultivation, and then adds several minor particulars regarding the subordinate distribution of the water and the collection of the revenue therefrom.

For particulars, see Report, paragraphs 7 to 11.

15. He thinks further that the Company must be bound to make ample provision to carry off the drainage of the country, and maintain a free passage on all existing roads over their canals.

16. With respect to the other* sources of profit accruing to the Company, Captain Greenaway considers that the tolls should be light, and fixed by Government, and levied by a registry of boats rather than by lockage as being easier of collection and protective from both oppression and fraud on the part of the toll collectors, but that all other tolls should be left to be regulated by the usual laws of demand and supply, while for water supplied for general purposes of domestic consumption, a charge should not be made, as it would be extremely unpopular in this country.

* Viz, navigation tolls, rent for mill power, water supply for general purposes, &c.

17. He concludes with observing that the Company will need protection from trespass, and other misdemeanours liable to be committed on their works, and recommends that the Company's Engineers should be empowered to act as Magistrates within the limits of their canals.

18. The opinions called for by the Supreme Government appear to have reference rather to the terms on which the Company shall be allowed to carry out their undertaking, and the degree of supervision and control to which their works should be subjected, rather than to any critical discussion on the merits or designs of the works themselves. Indeed it would be superfluous to enter upon the latter, after the notable works of a similar character in this Presidency, whose results are now in full operation and are patent to all.

19. In the first condition proposed by the Secretary of State, I conclude that the plans therein alluded to, refer only to the general and not to the detailed design, and scope of the works. If so, I am of opinion that it would certainly be desirable, and I imagine not unacceptable to the Company themselves, to have the benefit of consultation with experienced local Officers regarding works which are of necessity both novel in character and gigantic in design when compared with works constructed for similar purposes in European countries. Indeed in order to secure the essential principle, that only such works shall be constructed as are suited to the present circumstances of the country, and are calculated to fulfil their several purposes in the shortest time at the least cost, it appears necessary that qualified Officers on the part of Government should be called in on consultation, but this should not extend beyond the discussion of general principles and designs, and I strongly deprecate any interference in details.

20. By general principles, I mean such as the site and general design of the head works, the starting points and termini of canals, their general direction, their adaptation to steam navigation or otherwise, the order of importance in which they should be held and constructed, and similar conditions.

21. The 2nd condition is one of such minor importance in this country as scarcely to be worth taking into consideration, or making special provision for, as of course the intention can only be to charge the *present* value of the land, which must be trifling.

22. As respects the 3rd condition, I am quite of Captain Walker's opinion that it is both unnecessary and undesirable to hamper the question by any previous legislative enactment, both as the settlement will probably give rise to desultory discussion, involving useless and hurtful delay, and because, after the works are in operation, circumstances may arise which may render fresh legislation necessary.

23. It is certainly highly necessary for the protection of the people, that the Government should be the ultimate arbiter of the rates which shall be imposed, whether for irrigation or navigation, but the manner in which those rates are to be levied, and their amount, are not essential points to be discussed before the people themselves, who are now dying for lack of food, are relieved.

24. The proper time for that discussion would seem to be after the people have been put into a condition to pay any rate at all. I am disposed also to question the policy of the water being sold to the Government alone. It may, if considered necessary, be well to insert a clause to the effect that the claims of Government upon the water shall be primarily attended to, but with the superabundance in Delta rivers, restrictions of this nature seem scarcely to be called for; and as regards tolls for navigation, though there is not the same objection to them where a Company work their own boats, yet it is quite a question whether the canals should not be thrown open for free navigation, and the Company otherwise remunerated, as for instance by a small additional price for their water; and it is one of those questions, which cannot and should not be previously decided, but which must depend on a variety of circumstances at present impossible to foresee.

25. All such minor points therefore as are laid down in Captain Greenaway's letter should not be allowed to stand in the way of the commencement of the works, against every day's delay in which the present wretched state of almost the whole of India loudly protests.

26. I have no hesitation in affirming that were it not for the great works on the Delta rivers in the Coast Districts of the Presidency, there would have been a repetition of the horrors of the year 1833, and if the works in the Godavery and Kistna had been delayed until the water rates had been settled, we should now have had to discuss the manner in which those Districts could be relieved, instead of drawing upon them as the magazines for other equally favored, but unimproved parts of the Peninsula. There can be no doubt but that had the works in Orissa been even partially in operation, they would most materially have contributed to relieve the present appalling distress in the North West.

27. On the grounds both of policy as well as of humanity, I would deprecate the attempt to settle questions of secondary importance which can only lead to mischievous delay.

28. On the last condition I conceive there can be only one opinion, that the shareholders who agree to risk their money, should be allowed to reap the full results of that risk. No one would think of offering to share their losses, and so I am of opinion there should be no interference with their gains.

29. In conclusion, I would only beg leave to express my regret at the delay which has occurred in disposing of this subject, and to suggest that as in all probability the reply of the Supreme Government has long ere this been despatched to the Secretary of State, that a copy of the Proceedings of this Government on these communications should be also forwarded direct.

From Captain J. STODDARD, District Engineer Godavery, to the Deputy Chief Engineer Northern Circle, dated Dowlaishwaram, 21st December 1860, No. 1,486.

SIR,

1. With reference to the Chief Engineer's Resolution No. 7,910, dated 13th instant, on certain papers connected with the proposals of the Directors of the Madras Canal and Irrigation Company, to undertake the Irrigation and Navigation works on the Mahanuddy in Orissa, I have the honor to state that the conditions offered to the Company by the Secretary of State in Mr. Barings' letter of the 2nd June 1860, seem to me equitable, and such as, if impartially carried out, would leave nothing to be desired to make the speculation profitable to the Company, advantageous to the Government, and productive of vast benefit to this country as well as to England.

2. After my experience of seven years in this District, where works similar to those proposed to be executed in Orissa have not yet been completed though commenced fifteen years ago, I should not hesitate to decide in favor of the Orissa project being committed to a Corporation enjoying so much public confidence at home as the Madras Canal and Irrigation Company, since, with its great command of the means, such a Company would vigorously prosecute the undertaking (gigantic though it be) to a speedy completion. It could not in fact afford to do otherwise.

3. Another very great advantage to be derived from such works being undertaken by Companies, is the opening it would give to the introduction of European skill and talent into this country, as doubtless the greater part of, if not all the engineering staff will be sent out from England.

4. As I possess no local knowledge of the country in which these works are to be projected, it would be presumption in me to offer an opinion on the kind of works required, or as regards the certainty of their proving remunerative, but if the Delta of the Mahanuddy is as favorably placed for irrigation as those of the Godavery and Kistna are, they cannot but be highly so.

From Captain T. GREENAWAY, Acting District Engineer Nellore, to the Deputy Chief Engineer, Central Circle, dated Nellore, 27th December 1860, No. 2,583 :—

SIR,

1. I have the honor with reference to foot note No. 7,910, dated 13th instant, appended to Extract Proceedings Madras Government, No. 2,521 of 7th instant, to submit the following observations on the prospects of the Madras Irrigation and Canal Company, for construction of works of Irrigation and Navigation in Orissa.

2. The Company propose to construct a series of irrigating and navigable canals in the Deltas of the Mahanuddy, Baitarni and Brahamani rivers, with continuation to the Hughli near Midnapúr.

3. The main line of this system of canals will afford safe and unbroken inland navigation from Ganjam to Calcutta, while above 40,00,000 acres of land will eventually be irrigable from the works.

4. It would be superfluous to enlarge upon the advantages of such an undertaking, they speak for themselves, and are I believe undisputed. It is equally unnecessary to undertake to prove its feasibility for which the complete success of similar operations on the lower Godavery is a sufficient guarantee.

5. It is unquestionably a subject of regret that the whole of the very large profits derivable from such a work should not be realized to the Revenue, by its being undertaken as a Government project, in which manner it might, I am also convinced, be effected with greater despatch and more economically than by a Company. But if this be considered unadvisable, it is certainly the next best thing for the Government, and equally advantageous to the country, that all possible facilities for its execution should be afforded to any Company willing and able to undertake it.

6. It is essential that all the conditions both of construction and subsequent management should be clearly and unmistakeably defined before work is commenced, and this once arranged, I would suggest that the less interference with the Company's operations while in progress, the better for all parties.

7. The Secretary of State for India proposes the following conditions:—

(1.) That the works be constructed on plans approved by Government. To this I would suggest an addition, that as in the progress of the works some alterations and improvements are likely to offer themselves, which it might be difficult to foresee, an opening should be left for the introduction of such modifications to be proposed by the Company's Engineers, approved by a Committee of Engineers selected by Government, or by the Consulting Engineer, should such Officer be appointed, and only carried out after receipt of Government sanction.

The Company's works must at all times be open to the inspection of the Consulting Engineer, or if no such Officer be appointed, of the Deputy Chief Engineer of the Circle, or any other Officer or Officers deputed by Government for the purpose.

(2.) The land taken up for the works to be provided by Government, and its value eventually paid for by the Company after their dividend reaches 5 per cent.

The said land should be valued at once at its present value, it would not be fair to charge the Company for it at the enhanced price, which land in the District will eventually bear, and which will be entirely due to the works themselves. The land taken up should include not less than 20 yards clear beyond the foot of the outerslopes of embankments of navigable canals on each side, and 10 yards clear in the same manner of minor channels.

(3.) The rates charged for every description of use of the water, to be fixed by an Act of the Indian Legislature before the works are commenced, and all water supplied for irrigation to be sold to Government alone.

I would suggest that all water for irrigation be sold by measurement, the unit being taken a one cubic foot per second sufficient for fifty acres of rice cultivation. If this is an understood thing before the works are planned, there will be no difficulty in applying the principal of the Italian module on an enlarged scale, the area of each guaging vent in the reservoirs being calculated by a fixed formula. By this means the supply water to each branch Channel could be determined with sufficient accuracy for all practical purposes.

No direct irrigation should be permitted from the Navigable Canals, nor any water used for Irrigation that has not passed through a module.

Applications for water should be made through the Revenue authorities, who would furnish the Company's Engineers with a list of the requirements for each estate or village, in cubic feet per hour, three months previous to the cultivation season. No separate guaging vent should be allowed for less than 500 acres. No requisition to be for less period than one year. No remission of water rate to be granted, provided the module Register shows that the regulated head was kept up on the average in the reservoir during the season of cultivation.

Water rate to be paid by the Revenue authorities to the Company, minus cost of collection.

Extra superintendence of subordinate distribution of water after it has once left the guaging vent, to be paid for by the parties requiring it.

Cost of putting in or closing guaging vents in reservoirs to be borne by the Company.

Minor distributing Channels not exceeding one yard section, to be made by the parties requiring them at their own expense.

It will be impossible for the Company to undertake the distribution of water to separate fields and holdings, or into minor branch Channels not starting directly from a reservoir ; but wherever such sub-division may be required it should be the duty of the Collector, before making application for the supply, to call upon the parties concerned to enter into a definite agreement as to the sub-division by means of dividing dams and guage vents at the points of divergence, and it should be the duty of the Company's Engineers to furnish plans for and construct such minor works suitable to the specified conditions, the said works to be paid for by the party using them.

The Company must be bound to make ample provision for carrying off drainage of the country, and for maintaining free passage on all existing roads over their Canals by bridges.

The embankment of the rivers and protection of the country from floods, forms a most important part of the scheme. I would suggest that the embankments should be thrown somewhat further back from the natural bank than has hitherto been usual, the trifling loss of land would be amply compensated by the increased security of the works.

12. The other sources of profit to the Company as stated by them will be :—

Tolls levied in Navigable Canals.

Rent for mill power.

Supply of water for general purposes.

Working the Canal by the Company's boats.

Cultivation and sale of Timber, &c., grown on the Company's land.

The tolls on navigation should be light, and the rates fixed by Government I would suggest that they should be levied by registry of boats rather than by lockage. Former plan informs the boat owner at once what he has to pay, is easy of collection and safe from fraud ; whereas lockage exposes both Company and boat owners to the risk of imposition, and often presses with undue weight on boats which traverse fewest miles of canal and derive least profit from the navigation.

I would suggest that the rates for rent of mill power, cultivation and sale of produce, and passenger or goods traffic by the Company's own boats, require no Government interference, the usual laws of supply and demand will sufficiently regulate them.

I would object to any charge for supply of water for general purposes ; such as drink for men and cattle, the quantity so consumed is incapable of measurement, and any such charge would in this country be extremely unpopular.

A charge might however be made at irrigation rates for filling dhobies tanks or supplying factories.

The Company will require protection from wilful damage to works, trespasses, unauthorized cattle grazing, throwing rubbish, ballast, corpses, &c., into the canals. Dhobies washing in Canals and reservoirs, riots of drunken lascars and barge men, breach of navigation rules established by the Company for public convenience and the like, all these evils have began to show themselves on the Godavery Canals, and the regulations now in force appear insufficient to check them, the distance of the Magistrates, Court, and consequent delays render prosecution often impossible and always a nuisance. Additional severity is *not* required, but promptitude *is ;* and I would suggest that within due limits certain approved Officers of the Company's Engineers should be empowered to act as Magistrates *upon* the Canals.

15. In apologizing for the length of these remarks, I beg to explain that those upon the system of water measurement were induced by the recollection how great an annoyance the absence of any such arrangement was to myself in the Godavery District ; it involved a great deal of additional labor, incessant measurement of the open sluice, heads, and weirs, with a fresh calculation for every one, and afforded openings for the ryots to make false complaints of not getting their proper allowance, though in reality its true result was in most cases an over-supply and consequent waste of water.

From Lieutenant Colonel A. J. M. BOILEAU, District Engineer of Godavery, to the Chief Engineer, dated Chepauk, 21st December 1860.

SIR,

Adverting to your Resolution, No. 7,910, dated 13th instant, appended to the Proceedings of Government, No. 2,521, dated 7th December 1860, I have the honor to inform you, that being wholly unacquainted with the Orissa country, and with the rivers which it is proposed to utilize, I am unable to offer any opinion on the subject of the works of irrigation and navigation to be there constructed.

From Captain G. W. WALKER, District Engineer of Canara, to the Deputy Chief Engineer Central Circle, dated Sircy, 5th February 1861, No. 189.

SIR,

I have the honor herewith to forward copy of my Report† on the proposed works of irrigation and navigation in Orissa, as called for in your Memorandum, No. 135 of 29th January 1861.

† No. 164, 28th December 1860.

From Captain G. W. WALKER, District Engineer North Canara, to the Deputy Chief Engineer, Department Public Works, dated Honore, 28th December 1860, No. 164.

SIR,

1. I have to acknowledge receipt of the Chief Engineer's order, No. 7,910 of the 13th December, calling for an expression of my views in connection with the proposed extension of the operations of the Madras Irrigation and Canal Company, to the construction of works of Irrigation and Navigation in Orissa.

2. I cannot but think that the undertaking is one in which the utmost freedom of action should be allowed. The project was originally started by Major General Frederick Cotton in a Report on the Northern Division, which I had the pleasure of perusing in 1856; and it has subsequently been investigated and reported on favorably by Colonel Arthur Cotton. Its commercial success, and its direct benefit to the population of a large tract of country, are thus guaranteed by the very highest professional opinions that this Presidency can afford.

3. Her Majesty's Government appears to me to have secured the most favorable terms possible under existing circumstances. For although a larger direct revenue might be raised by construction of the works on behalf of Government, with funds provided by a Public Works Loan, yet it has not at command the necessary agency for superintending such an undertaking. As far as this Presidency is concerned, the routine operations of the Department of Public Works, such as the conservancy, completion, and extension of the existing irrigation works, and the construction and maintenance of those communications, without which the mere increase of production is of limited value, are crippled for want of experienced superintendence; nearly all the older Officers of Government still in the service, who gained their experience in the former school, having been taken away from District duties to fill a number of higher special appointments which have been created in the new department. Consequently no Engineer Officers of any experience can be spared from Madras to work in Orissa.

4. Nor would it answer to import the necessary engineering science from Europe on behalf of Government, so much time being unavoidably lost before the best Engineers from Home acquire that knowledge of the country, the people, and the languages, without which they cannot satisfactorily manage the minor but essential details of their operations. Moreover, men of any real Home experience will come out at an age when they are less able to stand the climate than Government Officers, who have gradually been acclimatized; and their services may have to be replaced at a critical moment, more readily than is generally found possible through the cumbrous intervention of Government Officers.

5. Such risks it should be left to private enterprize to incur; and in the present case, where the Company is formed without a Government guarantee, numbers amongst its Directors and Managers, many men of great Indian experience, and commands the professional opinions of the Cottons and other retired Indian Engineers thoroughly acquainted with the management of

Irrigation Works, I should deprecate the idea of any professional supervision on the part of Government, or even any interference with the design and execution of the Orissa works. At the same time, should the Company desire them, the opinions of the Government Engineers may always be called for.

6. A young and active Government Officer, Covenanted or Uncovenanted, Civil or Military, no matter how or where he has acquired the necessary revenue and magisterial experiences should, however, be attached to the scene of the Company's operations, for the special purposes of making over to its Agents without delay all land that they can show by actual surveys to be necessary for the works; to carry into operation the provisions of the Act authorizing the assumption of such land for public purposes; to fix and disburse the amount of compensation for the same; and as water is provided, to act on behalf of Government with reference both to the Company from whom it is purchased, and the cultivators to whom it is supplied.

7. It would also obviate delay if the question of tolls, rates, and fares, were left for future adjustment by the Company instead of being defined by a preliminary Act; provision for all public communications, existing or future, being conveyed across all branch irrigation works at the cost of the Company, being alone insisted on. The interests of the Company will lead them to adopt the lowest tariff consistent with a reasonable profit; and as no guarantee is given, so need no trammels be imposed. Not that the mere fixing of rates in advance is so objectionable, as delay for that or other purposes in drawing up the conditions of agreement.

8. I have said above, that Engineer Officers of experience cannot be spared by Government to assist in these works; but it is very desirable that arrangements should be made to enable younger Officers to take advantage of the opportunities for practical study which they will afford; and it would be mutually beneficial to Government and to the Company if a stipulated number of the Assistants on the works are appointed from the corps of Engineers; those fitted for the rank of 1st Assistants by their previous service on Government works being paid by the Company, who will profit by their local knowledge; and 2nd Assistants being maintained at the cost of Government, to whom it is an object that this extensive school of practical science should not be entirely lost to their own Engineers.

(True Copy.)

(Signed) G. W. WALKER, Captain,
District Engineer of Canara.

No. 269. Endorsement of the Deputy Chief Engineer in charge of Central Office of Public Works, dated Chepauk, 31st May 1861, No. 1,048:—

From Lieutenant-Colonel E. LAWFORD, Chief Engineer, in Mysore, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, dated Bangalore, 22nd May 1861, No. 273.

SIR,

1. In acknowledging the receipt of your letter of the 18th instant, No. 653, I must express my regret at having allowed so long a time to pass without submitting the report called for by Government in their Order No. 2,521 of the 7th December 1860; but I did not receive the detailed reports on and plans of the rivers in Orissa, until just before leaving Madras, and my attention has been so taken up with the duties of my present office, which have been more absorbing owing to the early departure of Captain Wilkieson, that I have suffered the papers under reference to be overlooked.

2. Having, however, given the subject my best consideration, I have arrived at the same conclusion as I believe almost all other Officers, that the improvements of the Mahanuddy by the regulation of the discharge of its floods at the head of the Delta, is an object of the utmost importance to the welfare of Cuttack; and as far as I can judge from the data before me, the scheme is one of feasibility, though unquestionably of great difficulty, owing to the magnitude of the river, and the violence of its floods.

3. Although there can be no reasonable doubt that the construction of an anicut across both branches of the Mahanuddy, would very greatly tend to equalize and render harmless the enormous discharge of extrems freshes, yet as Colonel Young considers the entire volume at such

seasons greater, than the collective channels can safely carry off, and as the proposed cut into the Chilka lake would not very materially reduce this excess, it seems clear that the proposed works would modify, but not completely remove existing evils.

4. The anticipated advantage to the revenue and the welfare of the District need not be questioned, nor do I think it advisable to enter into minute calculations of profit in a matter which affects the population so deeply as this. It is not to increase, but to secure the revenue, and with it, all the best interests of the people of Cuttack, that these works should be undertaken; but no Government nor Company possessing the requisite capital for the purpose, would entertain any doubt of their obtaining ample returns for their outlay.

5. Were the Government in a position to assume the executive control and conduct of these works, I should strongly recommend their doing so, but on the understanding that the State will not contract a loan for such special purpose and has not otherwise the necessary funds. I see no other course to follow than to entrust the operations to a Company willing to undertake them.

6. The reports and plans received from your Office are herewith returned.

Submitted to Government in continuation of Chief Engineer's letter No. 861, dated 25th May 1861.

(Signed) W. I. BIRDWOOD, Lieut,-Colonel.
Deputy Chief Engineer,
In Charge of Central Office of P. W.

No. 270. Proceedings of the Board of Revenue, dated 19th July 1861, No. 3,850 :—

Read the following Replies to the Board's Circular, dated 20th December 1860, No. 5,995.

No. 284, From Ganjam, 7th, in Cons. 15th January 1861, No. 7.
,, 705, ,, ,, 28th January, in Cons. 4th February 1861, No. 25.
,, 1,087, ,, Kistna, 15th January, in Cons. 20th February 1861, No. 40.
,, 949, ,, Salem, 9th, in Cons. 14th February 1861, No. 17.
,, 597, ,, Tanjore, 26th, in Cons. 30th January 1861, No. 30.

1. Resolved that the letters above recorded be submitted for the consideration of the Honorable the Governor in Council.

2. With the Proceedings of Government, dated 7th December 1860, No. 2,521, was communicated a letter from the Government of India forwarding the prospectus of the East India Irrigation and Canal Company and other papers on the subject of the Company's undertaking the irrigation of Orissa, and other works, *without* guarantee, and requesting the Government to state its views on the matter, especially as to the degree and nature of the control which it may be necessary to exercise on the operations of the Company. The Government of India intimated at the same time that every thing should be done to give the experiment the best chance of success, and that the utmost freedom of action should be allowed consistent with fairness to Her Majesty's Government and her native subjects.

In Cons. 8th December 1860, No. 6,412.

3. The above correspondence being forwarded to the Board for their opinion, it was deemed expedient by them to consult some of the Collectors on the subject, and accordingly they circulated the papers to the Officers noted in the margin, for any remarks that their experience of large river irrigation works might suggest either as to conditions to be required or precautions to be insisted on.

20th December 1860, No. 5,995.
Collector of Ganjam.
Godavery.
Kistna.
Salem.
Tanjore.

4. With a subsequent Order of Government, dated 9th January 1861, No. 53, a further correspondence with the promoters of the project was received by the Board. This was also circulated for the information of the Collectors abovementioned and the replies received from them to these calls are now submitted with these Proceedings.

In Cons. 10th Jan. 1861, No. 167.

5. The Collector of Ganjam is altogether against the Company's undertaking the works in question, and thinks that there are very cogent reasons why the Government should carry them on in preference to any private Company, even if it should be necessary to raise a loan for this express object. These reasons are—1st, the profitable character of the undertaking as shown by the prospectus, and the inexpediency of depriving the public treasury of profits arising from the application of natural resources in a country where the Government is itself the chief landlord and mainly dependent on the land for its revenue ; and 2nd, the difficulty of adjusting the seperate interests which the Company propose to assign to the Government and its own shareholders. Should it, however, be resolved to permit the Company to carry out its project, Mr. Forbes is of opinion that it will be necessary to assign a maximum depth to the canal beyond which it shall not be at their option to withhold water from irrigation purposes, and that it is a fair question in reference to the seignorial rights of Government over the rivers, whether they should not insist on the gratuitous supply of water beyond a certain depth. In his second letter on the same subject, he points out that the scheme of the Company does not necessarily involve the construction of embankments to the extent required for the protection of a large tract of country, and that although the dangers and miseries of an inundation are forcibly described in the papers of the Company, no allusion is made in them to the only works which will form a safe-guard against such a calamity, and which are decidedly not of a remunerative character.

6. The Collector of Godavery has not yet replied to the Board's Circular, which circumstance has been the main cause of the delay in submitting this report to Government. From the extensive character and magnitude of the works executed in that District, the Board attach much importance to the report of this Collector, and have called for an immediate answer, which, when received, will be laid before Government.

7. The Collector of the Kistna District notices a few points which appear to him to need precaution. These relate chiefly to matters of detail, and are as follows :—

First.—Owners of lands taken up by the Company to be fully compensated. Compensation to be paid also for injury done by floods, interception of drainage, or percolation from the canals.

Second.—Cross-roads and village tracts intersected by the Company's canals to be provided with bridges, ferries, or well-metalled and sloped fords ; and the District Officers to have power to call on the Company to construct them where necessary, subject to an appeal to Government.

Third.—Ryots to be allowed free transit in their own boats within the limits of their own villages for all ferry purposes, whether to transport themselves or their produce from one bank to another of a canal. By the proposed rules, the Company would have the right to charge a toll on all such boats.

Fourth.—Compensation to be given to Ryots for loss of crops owing to failure of a timely supply of water as well as the remission of water rate. Partial remission of water rate to be secured when crops partially fail from want of water.

Fifth.—In all matters of dispute between the Company and the Ryots, the decision of Government to be final.

Sixth.—In cases where the supply of water is insufficient to meet all demands of navigation and irrigation, irrigation of crops actually sown on the faith of a supply should have the preference.

Seventh.—Water for drinking and household purposes to be supplied gratis. Slopes to enable cattle to drink to be constructed where required, but to be paid for by the villages requiring them.

Eighth.—No charge to be made for water supplied to tracts, the existing supply of which has been intercepted by the Company's canals. An average of the irrigated area in past years to be taken as the extent to which water should be so supplied, and not the largest known area of irrigation.

Ninth.—The collection of the revenue accruing from the works, and the distribution of the water after it has left the main channels to be as much as possible under the control of the Officers of Government; but if the Government think fit to leave either the one or the other to the Company, they are to have the power to revoke such concession at the commencement of any season, and over any portion of the works.

8. The Collector of Salem remarks that it does not occur to him to suggest any addition to the conditions on which the Secretary of State for India has declared his readiness to enter into an engagement with the Company. He lays stress, however, on the points that Government Officers should have entire control over the distribution of the water, and that the supply when once devoted to irrigation should be kept up for that purpose.

9. The Collector of Tanjore considers that the terms offered by the Secretary of State comprise all that is necessary. He would, however, expressly stipulate that the irrigation works erected by the Company should be kept up and maintained in an efficient state, with the view of protecting the interests of those cultivators who in reliance upon the stabilty of the works may have invested their capital and industry in the culture and tillage of the land.

10. The Board concur in most of the suggestions offered in the foregoing letters, but observe that the Acting Collector of the Kistna District has lost sight of the fact that by the terms of the proposed undertaking, water for irrigation is to be sold solely to Government, and that the Company will have no transactions with the Ryots in this matter.

11. Such detailed arrangements as he refers to in his suggestions regarding passage across the canals and drinking places for cattle had best be generally provided for by the Legislature, and left to be enforced by the ordinary Magistracy.

12. The only points on which it occurs to the Board to lay stress are that the obligation to sell the water to the Government for irrigation should be distinctly defined; the option of retaining it for purposes of navigation should not be unchecked, and that full provision should be made for the due maintenance of the works, and specially of the embankments with a power reserved to Government to interfere if deemed necessary, and as an ultimate resort to take possession of the works; the liberty of the Company to relinquish the works to Government being also reserved.

13. The Board have so little practical acquaintance with the capabilities of the country in question, and the tenures under which the land is held that they do not feel themselves competent to offer any suggestions as to the price which Government should bind itself to pay to the Company for the water under the proposed Act of the Legislature.

14. As to the principle of entrusting the execution of such works to a private Company, the Board will only remark that in their opinion it would be better that they should be executed directly by Government, even if it were necessary to raise a loan for the special purpose; but if in the present financial position of the State this plan is not considered feasible, then rather than delay works which are of such vast importance to the community, the Board would advocate that the fullest amount of encouragement within reason be given to the Company, while existing rights are carefully guarded.

(A true Extract.)

(Signed) W. HUDLESTON, *Secretary.*

In Consultations 15th January 1861, No. 284.

From G. S. FORBES, Esq., Collector of Ganjam, dated Chetterpoor, 7th January 1861, No. 7.

1. I have the honor to reply to the Board's Order, No. 5,995, dated the 20th ultimo, forwarding correspondence regarding the proposal of an English Company to undertake the execution of extensive works on the Mahanuddy and other rivers flowing into the sea between it and the Hoogly, in view to the construction of a navigable canal from Balasore to the latter river, which canal it is also intended shall be available for irrigation.

2. There appear to me to be very cogent reasons why the Government should undertake these works in preference to any private Company, even if it should be necessary to raise a loan for this express object.

3. The first is the very obvious argument arising from the profitable character of the undertaking (as described in the Company's Prospectus.)

4. Private enterprise can no doubt be brought to bear with advantage in the *execution* of the project, but surely it should not be allowed to deprive the public treasury, in any instance, of profits arising from the application of natural resources in a country where the Government is itself the chief landlord and mainly dependent on the land for its revenue.

5. Secondly. It would be difficult to adjust the separate interests which the Company propose to assign to the Government and to its own shareholders. The benefit to be derived by Government depends on the extent to which water can be made available for irrigation, but the Company is dependent for its profits on the canal being constantly maintained at a navigable depth. It is presumed that the Company propose to sell their surplus water to Government *only* after securing the navigation and, besides the supply to be sold to Government, water will it is stated be furnished to other parties for general purposes.

6. During the S. W. Monsoon the land will not stand in much need of the canal, but during the dry months when water is necessary to the safety of perhaps a great extent of crop, there will be also a necessity for husbanding it in the canal, as the rivers become low at that season. At such times the difficulty I have spoken of would arise, and if the Company is to undertake these works, it will be necessary to assign a maximum depth beyond which it shall not be at their option to withhold water.

7. Great judgment will be necessary in estimating what quantity of water in excess of such maximum can be counted upon in dry seasons, for upon this will depend the direct value of the work to the Government (supposing it undertaken by the Company). I think the question might also be fairly raised whether, in reference to the seignorial rights of Government over the rivers, they should not insist on the gratuitous suply of water beyond a certain depth.

In Consultations 4th February 1861, No. 705.

From G. S. FORBES, Esq., Collector of Ganjam, dated Chetterpoor, 28th January 1861, No. 25.

1. In reference to the receipt of further papers from the Board's Office, connected with the proposal of private Company to undertake the works of irrigation and navigation in Orissa, I have only to add to the remarks I have already had the honor to submit to the Board, that the scheme now before the Government of India probably differs materially from that of the Company in the prominence given to the construction of embankments for the protection of the Delta country from inundation. A scheme undertaken purely with a view to commercial profit and the main feature in which is the formation of a canal crossing the water-shed of the rivers in Bengal and Orissa, would not of necessity combine works of this character to the extent required for the protection of a large tract of country.

2. I do not observe in the forcible description given by the Company's Secretary of the dangers and miseries of an inundation, any allusion to the only works which would form a safe-guard against such a calamity and which are decidedly not of a remunerative character.

In Consultations 20th February 1861, No. 1,087.

From G. THORNHILL, Esq., Acting Collector of the Kistna District, dated Masulipatam, 15th February 1861, No. 40.

1. With reference to the Board's Proceedings, No. 5,995 of 20th December 1860, calling for opinion on the restriction necessary to be imposed on the Orissa Irrigation Company, I have the honor to append a few remarks on the points which appear to me chiefly to need precaution.

2. Owners of lands taken up by the Company for their works will of course be fully compensated. It will also be necessary to provide that owners of adjacent lands may be compensated for injury done by floods, interception of drainage, or percolation from the canal; much land adjacent to channels in this district has been rendered salt and barren, by water percolating upwards and bringing saline matter to the surface.

3. The canals of the Company will cross the lines of land traffic in all directions; bridges will of course be provided on all lines of high road, but cross roads and village tracts should be provided with bridges, ferries, or well metalled and sloped fords; these would hardly obtain a place in the general plans submitted to Government, and the district officers should have the power to call on the Company to construct them where necessary, subject to an appeal to Government.

4. Ryots should be allowed free transit in their own boats, within the limits of their own villages, for all ferry purposes, whether to transport themselves or their produce from one bank to another of a canal; by the proposed rules, the Company would have a right to charge a toll on all such boats.

5. Compensation should be given to ryots for loss of crops, owing to failure of a timely supply of water, as well as the remission of water rate. Partial remission of water rate should be secured when crops partially fail from want of water.

6. In all matters of dispute between the Company and ryots, the Government's decision to be final.

7. In cases where the supply of water is insufficient to meet all demands of navigation and irrigation, irrigation of crops actually sown on the faith of a supply should have the preference.

8. Water for drinking and other purposes to be supplied gratis. Slopes to enable cattle to drink, to be constructed where required, but paid for by the villages requiring them.

9. No charge to be made for water supplied to irrigated tracts, the sources of supply of which may be intercepted by Company's canals, an average of the irrigated area in past years to be taken as the extent to which water should be so supplied and not the largest known area of irrigation.

10. The collection of the revenue accruing from the works, and the distribution of the water, after it has left the main channels should, I think, be as much as possible under the control of the officers of Government; but should the Government think fit to leave either one or the other to the Company, they should retain the power to revoke such concession at the commencement of any season, and over any portion of the works.

In Consultations 14th February 1861, No. 949.

From H. A. BRETT, Esq., Collector of Salem, dated Valapaudy, 9th February 1861, No. 17.

1. I have the honor to submit a reply to the Board's orders, Nos. 5,995 and 316, dated respectively the 20th December 1860, and the 17th January 1861; the former forwarding an order of Government, dated the 7th December 1860, No. 2,521, on a letter from Captain Dickens, Officiating Secretary to the Government of India, referring to a proposal made by the East India Irrigation and Canal Company to undertake works of irrigation and navigation in the province of Orissa.

2. The Board request me to make any remarks that my experience of large irrigation works may suggest on the subject of the Company's Prospectus, either as to conditions to be required or to precautions to be insisted on. It does not occur to me to suggest any addition to the conditions on which the Secretary of State for India has declared his readiness to enter into an engagement with the Company. Government officers should have entire control over the distribution of the water, and the works when once devoted to irrigation should be kept in repair. If due provision is made in the proposed Act to ensure these objects, I see no reason to think that the interests of the people who are to use the water would clash in any way with the interests of the Company.

3. I do not venture to offer any remarks regarding the proposed irrigation works, or the works intended to combine both navigation and irrigation, for my own experience on these subjects has been entirely confined to Government irrigation works, and to those only of a very small scale compared with the large anicuts belonging to the other districts named by the Board.

In Consultations 30th January 1861, No. 597.

From W. M. CADELL, Esq., Collector of Tanjore, dated Vallum, 26th January 1861, No. 30.

1. I have the honor to reply to the Extracts from the Proceedings of the Board of Revenue under date the 20th December 1860, and 17th January 1861, referring for my
No. 5,995. opinion certain papers connected with the Madras Canal and Irrigation Company
,, 316. as to their proposed operations in the district of Orissa.

2. In reply, I beg to state that, in my judgment, the terms offered by the Secretary of State seems to comprise all that is necessary. It is of the first importance, and with reference to the relative position of the Government and the cultivators of the soil in this country, that water supplied for irrigation should be sold to the Government and to them alone. I think, however, it would be advisable to introduce a stipulation to the effect that the irrigation works erected by the Company should be kept up and maintained in an efficient state. Should the enterprize prove remunerative (as there is every reason to hope) this is not likely to be neglected, but at the same time some protection or guarantee should be made on behalf of the cultivators who, on the strength of the works which may be carried out, have invested their capital and industry in the culture and tillage of land.

3. The provision that all land required for the works should, in the first instance, be given free of charge, is a wise and liberal one, and affords every scope and facility to the encouragement of private enterprise.

4. I do not conceive that it is either necessary or desirable to clog the Company with any agreements or stipulations further than is absolutely called for, to protect the interests of the State and its subjects.

No. 271. MINUTE BY THE HONORABLE W. A. MOREHEAD.

1. I am entirely in favor of the works in question being made over to the Irrigation Company; even were funds forthcoming, delay and disappointment would be the result of their being undertaken by the Government.

2. The terms granted by the Secretary of State are fair and reasonable; in preparing them in detail, however, care and experience will be required. The points noticed by Captain Greenaway call, in this respect, for special consideration.

3. There is also a circumstance connected with the terms to be conceded to the Company that I do not see alluded to, which is to the State and the Ryots a most important one, and that is that the uses to which the waters of the rivers referred to are already put must be strictly preserved and guarded from all risk and injury, and that in fact it is only for water in excess of what is now used that the Company are to claim payment. The water is at present the property of the Government, and by allowing the Company thus to deal with the surplus water they confer upon it far greater advantages than would result to the Company from a guarantee of interest at five per cent.

W. A. MOREHEAD.

2nd September 1861.

No. 272. MINUTE BY THE HONORABLE E. MALTBY.

1. As the Government has not funds or engineering establishments at its command to undertake the great works contemplated in Orissa, I am of opinion that it is desirable to make these works over to a private Company on the terms proposed by the Secretary of State in Mr. Baring's letter to the Secretary of the Madras Irrigation and Canal Company, dated 2nd June 1860.

2. Loss of valuable time would thus be avoided, and the great experiment of allowing important works of irrigation to be undertaken by private agency without a guarantee from the State would be tried in a locality which, as far as I am aware, is well suited for the purpose.

3. The proviso that no works are to be commenced without being approved by the Government furnishes a safe-guard against any injurious encroachments on the existing interests and rights of the State or private individuals, since due care would of course be taken to ascertain and secure those rights before permission was given to commence the works.

4. The restriction of the sale of water to the Government would prevent the Company coming into any embarrassing contact with the land-owners of the Province.

5. It is necessary for the interests of the Company especially, that the price to be paid by Government for the water should be fixed beforehand. But it seems to me sufficient to provide that tolls, rates, and fares for the navigation of the Company's Canals, shall be fixed by an Act of the Indian Legislature. Embarrassment and delay would probably arise from a proviso that this is to be done before the works are commenced.

6. Independently of other advantages I believe that India would benefit greatly by the spectacle of energy, skill, and science, which a private Company possessed of due capital would exhibit when working for its own profit in the manner which seemed to it best.

E. MALTBY.

3rd September 1861.

No. 273. MINUTE BY THE HONORABLE THE PRESIDENT.

1. I have read, with attention, the various papers which bear upon the proposal of the Irrigation Company to undertake, subject to certain general conditions, approved by the Secretary of State, the construction of works in the Province of Orissa, the object of which is to provide, in the first place, for the irrigation of a large area of land by the water of the Mahanuddy; in the second place, for the means of communicating with the sea board, and also with Calcutta by means of Canals, in the third place (to which, however, only incidental allusion is made by the Company) for the security of the lower country from the devastating floods which occasionally sweep over it. I should have been better able to give an opinion on the scheme proposed, had I been placed in possession of the Report and Plans upon which the project of the Company is based; as it is, I can only judge of it by applying such general principles as my experience may supply, combining these with the local information procurable from ordinary maps.

2. With reference then to the general scheme:—

3. There will not of course be any great difficulty in distributing the water which passes down the river in the rainy season over the land for the purpose of irrigation, and there is every probability that here, as in the Deltas of the Godavery and Kistna, these works may be made to return a very large interest upon the outlay of capital:

4. Neither would there seem to be any difficulty in providing, for a portion of the year at all events, the means of communicating by Canal with Calcutta, or in using the irrigation channels as means of communicating with the coast.

5. Judging however from the aspect, on the general maps of the country, of the basin of the Mahanuddy, I should imagine this District to be generally dry. The water-courses shown are far apart, there seem to be but few feeders, and I should imagine therefore that rain cannot be reckoned upon in quantity sufficient to give a second irrigation to the land, except perhaps occasionally, and in the dry season I should imagine that there would hardly be a supply sufficient for irrigation and navigation, probably for neither.

6. I have alluded to two of the objects stated at the commencement as being there proclaimed by the Company. With reference to the third, that is the protection of the low country from floods, I very much doubt the efficacy of any arrangement which a Company can be induced to make for the purpose; that something, nay much, may be done by means of embankments to restrain the mass of flood water with in definite limits, is certain; but then such works are not profitable in the ordinary sense of the word; they will not return interest upon the capital expended upon them, and therefore they will not, in all probability, be executed by a Company.

7. Having said thus much with reference to the scheme itself, I will consider the main question of how it is to be carried out, whether by a Company or the Government. I may observe, in the first place, that the general opinion seems to be that, if the Government could find money, such works would be better executed by it than by a Company, and in this opinion I fully concur, and shall be prepared to give what I consider substantial grounds for my opinion. If, however, the Government is too poor or its credit so bad as to deprive it of the power of raising money for such a purpose, there is no more to be said: If the work is to be done, it must then be through the agency of a private Company. Is however this the case? I believe not. I believe that the Government of India could raise money for any definite purpose, whether remunerative or not, at an easier rate than could a Company.

And I will now attempt to prove that it would be a wise economy were it to borrow money for the execution of works such as that of the Orissa Irrigation, provided, of course, that the data upon which the plan is based are sound and well digested.

8. In the first place, I have shown that one of the main objects for which the work is proposed will not in all probability be carried out by a Company, because it will not return interest upon the capital expended.

9. In the second place, as the revenue of the country to the extent of 80 per cent. is derived directly from the land, any arrangement which would give to a Company the whole of the increase arising from the application of water to the soil, would be, so far as the amount was in excess of the ordinary interest of the capital expended in bringing the water on to the soil, a complete sacrifice of revenue, and although it may be said that the people, and therefore the Government, would derive a great indirect profit from this outlay, yet I see no reason why there should be any sacrifice of revenue for which a direct equivalent is not given.

10. Again, should the work prove unprofitable, that is, should it return but a small interest upon the outlay, it will, in the hands of a Company, be sure to fall into disrepair, and any heavy accident, such as the destruction of an Anicut, would be sure to bring a pressure upon the Government to relieve the Company from the work; this would, of course, be done by purchasing up the stock, but not at the market price—no, the Government would be compelled to pay to each shareholder the capital he had contributed, and it would then become the owner of an unproductive work at a higher price than it could have constructed it for.

11. I will not allude to the many difficulties which are sure to hamper the working of a scheme in which two parties are concerned, whose interests are in many respects antagonistic; these have been alluded to by the different Officers to whom reference has been made. Although various remedies have been suggested by which these difficulties may be overcome or prevented, I am too well aware of the nature of the communications between the Government and a Company not to feel certain that fresh causes of complaint will arise day by day; the Government will press the Company to execute a particular work; the Company will consider this an undue interference with their liberty of action. On the other hand the Company will claim certain concessions from the Government, which the latter will feel compelled to refuse. After a careful consideration of all the bearings of this and similar projects, I am decidedly of opinion that the Government ought to execute such works by its own agents. These it can procure just as easily as a Company can.

12. I am also of opinion that the funds for such works should not be dependent upon the amount which can be spared from the current revenue year by year, but that a special appropriation should be made; and if necessary, the money should be provided for by loan. I mean that for the sake of economy the work should be pushed forward with the utmost speed, and that the Engineer should not be hampered in his arrangements by being told that he must not spend above a certain amount annually.

W. T. DENISON.

No. 274. ORDER THEREON, 27th September 1861, No. 1,788.

1. In the first three of the papers recorded above, the Chief Engineer and the Board of Revenue submit the opinions called for in the Orders of 7th December* and 9th January† last, regarding the proposal made to the Secretary of State by a private Company to undertake the Irrigation of Orissa, without a guarantee of interest from Government.

* No. 2,521, Public Works Department.
† No. 53, Public Works Department.

2. These papers together with the Minutes recorded on the subject by the Honorable the President and Members of Council, will be forwarded at once to the Government of India, with

reference to the Despatch from that Government dated 12th September 1860, No. 4,730, Public Works Department, and subsequent Proceedings in the same Department of 11th October 1860, No. 5,350.

3. Copies will also be sent direct to the Secretary of State.

(Singed) C. G. MASTER,
Deputy Secretary to Government.

Ordered that the following letter be despatched.

No. 275. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 27th September 1861, No. 1,789.

SIR,

1. I am directed to acknowledge the receipt of your letter of 12th September 1860, No. 4,730, forwarding papers connected with a proposal made to the Secretary of State by a private Company to undertake the irrigation of Orissa and other works, without a guarantee of interest from Government; and requesting this Government to express their views on the subject.

2. These papers were sent to the Chief Engineer and the Board of Revenue for their opinion, as were also the further papers on the same subject received with Extract Proceedings of the Right Honorable the Governor General in Council, under date 11th October 1860, No. 5,350. Their replies, accompanied by reports from several Officers consulted by them, have been lately received, and are now forwarded in extenso, together with separate Minutes recorded by the Honorable the President and the Members of Council.

3. Copies of the papers referred to will be sent to the Right Honorable the Secretary of State by the first opportunity.

No. 276. Read the following Endorsement of the Chief Engineer, dated Chepauk, 23rd September 1861, No. 5,186 :—

Read the following letter from Captain G. W. WALKER, District Engineer, North Canara, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Sircy, 16th September 1861, No. 107.

SIR,

1. I have just received intimation from Captain Baker of the Bombay Engineers of his arrival at Sedasheghur, under instructions from the Bombay Government to arrange a meeting with me, so that he may be ready to take charge of all Public Works within the portion of North Canara ceded to Bombay, as soon as I am authorized to give over charge to him. I have accordingly fixed Yellapúr as the place of our meeting on the 24th instant, as most convenient in all respects; and have instructed Lieutenant Fraser, and Mr. Overseer Fernandez to attend with all papers, &c., connected with the Sedasheghur aud Hullial Ranges, with which the ceded territory is almost exactly coincident. Nothing will be easier than to carry out the transfer so far as this Department is concerned by the 1st October, and I have the honor to solicit the authority of Government for concluding it on that date.

2. It is most desirable that the transfer should be made at once, to enable the Budget lists of 1862-63, to be compiled separately for the Madras and Bombay portions of the District by the 5th November. I have informed Captain Baker, that I have a vacancy for Mr. Overseer

Fernandez in another Range, and shall require his services replaced at my disposal at an early date; but that Lieutenant Fraser and Mr. Merrall are extra to the District establishment and will remain at their posts until arrangements have been concluded between the two Governments for their disposal. The only other member of the permanent establishment attached to works north of the Gungawully river is Sub-Overseer Mahomed Khan, who will probably be desirous of transfer to the Bombay Department Public Works if it can be permitted.

Submitted to Government with a request that the Chief Engineer may be favored with immediate orders with a view to the same being telegraphed to the District Engineer of North Canara for his guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 277. ORDER THEREON, 27th September 1861, No. 1,790.

1. The Chief Engineer will instruct Captain Walker (by telegraph) not to make over charge of his Department to Captain Baker without further orders from this Government.

2. The Government recently requested the Bombay Government not to send Captain Baker to Sedasheghur till the transfer had been fully and finally decided on. A copy of the despatch in question* will now be furnished to Colonel Horsley.

* 10th September 1861, No. 1,688.

3. As Captain Baker is now on the spot there can be no objection to his remaining to acquire local knowledge, should the Bombay Government wish it, but he should not interfere in any way with Captain Walker.

(Signed) J. D. SIM,
Secretary to Government.

No. 278. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 10th September 1861, No. 4,747:—

SIR,

1. I have the honor to forward for the consideration and orders of Government the accompanying letters from the District Engineer Tinnevelly, requesting that the salaries of the Lascars attached to his Office may be increased by reducing the number allowed.

2 Letters from District Engineer, Nos. 93 and 116, dated 31st July and 23rd August 1861.

2. The original proposition of the District Engineer, as contained in his letter, No. 93, dated 31st July 1861, was to reduce the number allowed, which is 8 to 6, and instead of paying them at the rates marginally noted, to grant them salaries as follows:—

	RS.
2 on 7 Rupees	14
6 on 6 ,, ...	36
Total...	50

	RS.
2 Head Lascars at 9 Rupees	18
4 Ordinary do. at 8 ,, ...	32
Total	50

3. The reasons which induced Captain Winscom to urge the foregoing proposition were, 1st, that prices having risen considerably in the District, it was found impossible to obtain efficient men for the salaries sanctioned by Government; and, 2nd, that the present incumbents prefer

obtaining employment on the Railway and in the Police to travelling about the District without their families, and without any allowance in the shape of batta to which the rest of the Office Establishment are entitled.

4. Considering however that it was very questionable whether the reduced number (6) proposed to be entertained would be sufficient to do all the work of the existing 8, and that the salaries proposed to be given to the Lascars were unnecessarily high, I requested the District Engineer Tinnevelly to re-consider his proposition, and to favor me with his opinion as to whether it would not be preferable to entertain 7 men on salaries of 7 Rupees each.

7x7=49 Rupees.

5. In reply the District Engineer suggests that, as there would be a sum of 1 Rupee available by the foregoing arrangement, a Head Lascar on 8 Rupees per mensem should be appointed in order to direct the rest, and to serve as an encouragement to the others to perform their duties efficiently.

	RS.
* 1 Lascar on 8 Rupees ..	8
6 Do. on 7 ,, ...	42
Totol *	50

6. Under the circumstances above explained, I have the honor to request the sanction of Government to the arrangement* last referred to, which, while it involves no additional expense on the State, will enable the District Engineer to secure the services of competent men.

No. 279. ORDER THEREON, 27th September 1861, No. 1,791.

The Government sanction the arrangement proposed in paragraphs 5 and 6 of this letter.

(Signed) J. D. SIM,
Secretary to Government.

No. 280. Read the following letter from F. LUSHINGTON, Esq., Acting Accountant General, to T. PYCROFT, Esq., Chief Secretary, to Government, dated Fort Saint George, 20th September 1861, No. 153 :—

SIR,

With reference to the Orders of Government in the Public Works Department, Nos. 153 and 1,379, dated 22nd January and 25th July last, and to your Memorandum No. 339, dated 11th instant, I have the honor to request that you will be pleased to move the Honorable the Governor in Council to inform the Secretary of State for India of the Receipt of the Coke consigned in England, per ship "Endymion," and ask him to forward an Invoice for the same at an early date for the purpose of being sent to the Chief Engineer, Department Public Works, to enable him to adjust the value thereof in his books.

No. 281. ORDER THEREON, 27th September 1861, No. 1,792.

The receipt of the Coke has been already reported to the Secretary of State in Despatch, dated 25th July last No. 61. He will however be requested to furnish the Invoice required by the Accountant General.

(Signed) J. D. SIM,
Secretary to Government.

No. 282. Read the following Proceedings of the Board of Revenue, dated 2nd September 1861, No. 4,751 :—

Read the following Register from J. I. MINCHIN, Esq., Acting Collector of Kurnool, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, dated Chepauk, 14th June 1861, of lands taken up for Irrigation and Canal purposes in that District for 1st quarter of 1861 :—

Tāluq.	Village.	Land taken.						How acquired.	From whom acquired.	Sum paid.	When paid.	Sum realized by the sale of buildings, timber, &c., on the land.	Net cost of land to Government.	When transferred to Irrigation Company.	Remarks.
		Number on the plan.	Purpose for which required.	Description.	Boundaries.	Extent.	Assessment.								
1	2				3			4	5	6	7	8	9	10	11
Ramalakottah.	Kullur.	No sanctioned plan has been received	Station ground.	Poonjah.	......	...	...	Sale.	Potula Dadisahib.	RS. 12	19th January 1861.	... ...	RS. 12 ...	...	This amount was paid as compensation for the loss of crops standing on lands entered in the 4th quarter of 1860. The Consulting Engineer has been twice applied to for the required plan. The land was made over in May 1860, under the order of Government.

Submitted for the orders of Government, with the Board's recommendation that the compensation paid during the 1st quarter of 1861, viz., Rupees 12, on account of loss of crops standing on lands taken up by the Irrigation and Canal Company in Kurnool, be sanctioned.

(A true Copy and Extract.)

(Signed) W. HUDLESTON,
Secretary.

No. 283. ORDER THEREON, 27th September 1861, No. 1,793.

Sanctioned Rupees (12) twelve. The Board of Revenue will state whether the lands referred to have been paid for.

(Signed) J. D. SIM,
Secretary to Government.

No. 284. Read the following letter from Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 25th September 1861, No. 32:—

SIR,

1. With reference to a Memorandum from the Deputy Secretary to Government No. 356,* I have the honor to state that in accordance with the Orders of Government of 30th July 1861, No. 1,415, the Agent was requested on the 3rd August to make arrangements for the remittance of the sum of Rupees 4,815-1-6 advanced in the Godavery and Nellore Districts to the Company on account of the Steamer "Thistle," and he has stated that the same has been referred to the Chief Engineer, on the receipt of whose reply the amount shall be finally adjusted and duly reported to Government.

* Without date.

No. 285. ORDER THEREON, 27th September 1861, No. 1,794.

There has been ample time for the adjustment of this item, and the Government desire that it may be settled without further delay.

(Signed) J. D. SIM,
Secretary to Government.

No. 286. Read the following Proceedings of the Madras Government in the Military Department, dated 20th September 1861, No. 3,361:—

Approving the Estimate for two small Tunnels to be constructed across a catch-drain near the Hospital of the Sappers and Miners at Dowlaishwaram. } (Vide Military Proceedings, 20th September 1861, No. 495-496.)

No. 287. ORDER THEREON, 27th September 1861, No. 1,795.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter of the 17th instant, No. 4,981.

(Signed) J. D. SIM,
Secretary to Government.

No. 288. Read the following Proceedings of the Madras Government in the Marine Department, dated 18th September 1861, No. 303:—

Referring for orders a letter from the Superintendent of Marine with regard to the proportion of Freight for Public Stores received per "Earl of Hardwicke." } (Vide Marine Proceedings, 18th September 1861, Nos. 50-51.)

No. 289. ORDER THEREON, 27th September 1861, No. 1,796.

Ordered to be communicated to the Chief Engineer, who is requested to report with reference to paragraph 5, whether he has provided for this charge in his Supplemental Budget.

(Signed) J. D. SIM,
Secretary to Government.

No. 290. Read the following Proceedings of the Madras Government in the Military Department, dated 11th September 1861, No. 3,193:—

Communicating Home Despatch, stating that the provision of Recruits for the European Sappers and Miners of the Madras Presidency will, for the present, be discontinued. } (Vide Military Proceedings, 11th September 1861, No. 232A.)

No. 291. ORDER THEREON, 27th September 1861, No. 1,797.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to Proceedings dated 26th March 1861, No. 617.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

Read the following letters :—

No. 292. From Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM., Esq., Secretary to Government, dated Chepauk, 14th September 1861, No. 4,900.

SIR,

1 Letter from District Engineer Tanjore, dated 19th August 1861, No. 110.
1 Do. District Engineer Nellore, dated 16th August 1861, No. 1,407.

Proceedings Madras Government, dated 14th June 1861, No. 1,096, and 27th September 1860, No. 2,012.

1. I have the honor to forward herewith two letters from the District Engineers of Nellore and Tanjore, relative to the difficulty which will be experienced in carrying into effect paragraph 5 of the Rules for drawing funds for Public Works expenditure, sanctioned by Government in their Orders noted in the margin.

2. The abovementioned Rule appears to have been framed particularly with reference to the report of the Accountant General, dated the 31st May 1860, No. 46, on the subject of the number and amount of cheques found to have been issued to Contractors, and to the observations of Government recorded thereupon in Proceedings of Government No. 1,286, dated the 18th June 1860.

3. Though the object intended in fixing a rule that payments to Contractors should invariably be made in cheques to be delivered to them in person by the Range Officer himself, was to ensure punctuality in the settlement of accounts with Contractors, as well as to prevent any irregular dealings taking place between Contractors and the Subordinates of the Department, it has been lost sight of that in Tanjore, the Contractors are the Heads of villages, or Mirásidárs, and in other Districts Head Wudders, who undertake work upon an agreement, and are called by the name of Contractors, simply because they have stipulated to perform certain work or works, within certain fixed periods, while the payments to them are not made like advances to Contractors for large works in considerable sums, but at short periods after measurements have been taken by the members of this Department.

4. This class of Contractors will, therefore, experience the same difficulty in cashing the chèques, which may be given to them in payment for their work periodically measured, that day-laborers and masons would experience, as remarked by Government in paragraph 3 of their Proceedings of the 18th June 1860, No. 1,286, if an imperative rule were passed to the effect that all payments above Rupees 25 should be made by cheque.

5. I therefore beg to recommend that District Engineers and Range Officers be allowed a discretion in carrying out the rule referred to, viz., that it be not imposed in the case of those petty Contractors and others, who are likely to be inconvenienced by attendance upon Range Officers when at a distance from their place of residence, or when this is far away from the station where the Contractor resides or where the work upon which he is employed may be situated.

6. District Engineers will, however, be directed to warn Range Officers to require a correct measurement of the work from their Subordinates, before issuing cheques to them for payment or delivery to Contractors as may be most convenient to the latter.

7. Paragraphs 1 and 2 of the letter of the District Engineer of Nellore will, I beg to state, be attended to in furnishing the Cheque Books proposed to be issued from the Lithograph Press, as mentioned in my letter No. 4,690, dated the 6th September 1861.

No. 293. From Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th September 1861, No. 5,035.

SIR,

1. In continuation of my letter, No. 4,900, dated 14th instant, I have the honor to submit for orders another letter* from the District Engineer of Nellore, bringing to notice, with reference to paragraph 5 of the new Rules for drawing funds, that certain Contractors have refused to accept *cheques* in payment of their dues, on account of the distance they have to travel to cash the same.

* 1 Letter No. 1,580, dated 6th September 1861.

2. I agree with Captain Mullins, that Contractors cannot be compelled to receive cheques in payment of their dues, unless it is so stated in the contract, and this part of the new Rules therefore cannot be enforced in all cases.

3. Pending the decision of Government on this point, I have instructed the District Engineer to continue the old system.

No. 294. ORDER THEREON, 28th September 1861, No. 1,798.

1. The Government await the receipt of the reports called† for from the Board of Revenue and the Accountant General on the feasibility of paying the cheques in the villages. The Board and Accountant General will be furnished with copies of the papers above recorded with a request to submit their replies at an early date.

† Order, dated 23rd September 1861, No. 1,772.

2. The Chief Engineer will, in the meanwhile, make the best arrangements he can for the payment of workmen in both the Districts alluded to.

(Signed) J. D. SIM,
Secretary to Government.

No. 295. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 11th September 1861, No. 4,771 :—

SIR,

Since Captain Rundall's appointment to act as Deputy Chief Engineer, *vice* Lieutenant-Colonel Ludlow in April last, an Order* by the Governor General in Council has been passed to the effect that "Military Officers in Civil employ holding substantive appointment "and ordered to officiate in another appointment are entitled to the full salary of the "former with a moiety of the latter." I have the honor to request to be informed whether Captain Rundall is entitled to the benefit of that Order, as a moiety of the salary of the appointment is forfeited by Lieutenant-Colonel Ludlow during the first six months, the whole during the remainder of his absence, so that a moiety is available for the Officer who acts for him during his absence, and that moiety is provided for in the Budget of the present year.

* No. 125, dated 25th June 1861, Gazette, page 1,735.

No. 296. ORDER THEREON, 28th September 1861, No. 1,799.

Referred to the Controller of Military Finance for report.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 297. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 22nd August 1861, No. 39 :—

SIR,

1. The following letters not otherwise acknowledged, were received from your Government during the month of July, viz., No. 50 of 27th May, announcing the intended departure for England of the Agent of the Contractor for the Madras Pier, and Nos. 51, 52, and 53 of 4th June, and No. 54 of 10th June, relative to the affairs of the Madras Irrigation and Canal Company.

2. With reference to your letter No. 51, dated 4th June, the employment of Messrs. Line & Co. (of which Firm Mr. Agnew is a member) in the carriage of machinery at a cost higher than would have been paid by the Executive Engineer, has been very properly adverted to by your Government.

3. The want of care on the part of the Agent of the Madras Irrigation Company, in not getting legal advice on Mr. Peachy's case, by which the Company is again a sufferer, is also very properly remarked upon by your Government.

4. With reference to the fact mentioned in letter No. 51 of the "full salary having been "drawn both by Mr. Agnew and Mr. Tawse, "during the time the former was absent from "Madras on duty," I would refer you to letters dated 14th January and 16th February 1860, extracts* from which are given in the margin, in which I have signified my positive refusal to sanction the arrangement.

5. On the subject of the other letters no remark appears to be called for.

* "I am directed by the Secretary of State for India in Council to acknowledge the receipt of your letter of the 2nd ultimo, and to acquaint you in reply that, for the reasons mentioned below, Sir C. Wood cannot approve of the communication proposed to be sent to Mr. Agnew, your Company's Manager at Madras, nor of the Resolution, appointing Mr. John Tawse to act as Manager in Mr. Agnew's absence."

"The draft letter to Mr. Agnew authorizes him to make a tour of inspection of the line of country through which the Company's works are to be carried. There seems to be not the smallest necessity for incurring any expense on this account. All the information which Mr. Agnew could obtain during his tour, can be readily collected by the Chief Resident Engineer." * * * *

"The Resolution regarding Mr. Tawse, assigns to him remuneration for his services at the same rate as that to which Mr. Agnew is entitled. Sir C. Wood can sanction no allowance to the gentleman acting for the Manager, except on conditions of a corresponding deduction from the Manager's salary." And

"I am directed by the Secretary of State for India in Council to acknowledge the receipt of your letter of the 27th ultimo, re-submitting for approval a proposed letter of the instructions to your Company's Agent and Manager at Madras."

"In the instructions permission is given to Mr. Agnew to make, at the Company's expense, a tour of inspection through the country to be traversed by the Company's works, drawing his full salary during the journey, while an equal allowance is paid to Mr. Tawse, the gentleman selected to act for Mr. Agnew, during the latter's absence from Madras."

"Sir C. Wood has already signified his objections to this arrangement, and he cannot therefore approve of the proposed instructions."

No. 298. ORDER THEREON, 28th September 1861, No. 1,800.

Ordered that paragraphs 2, 3 and 4, be communicated to the Consulting Engineer for the Irrigation and Canal Company.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 299. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th September 1861, No. 4,875 :—

SIR,

I have the honor to report for the information of Government, that at the urgent request of Captain Haig, I have supplied him with the instruments, as per accompanying list, from the stores of this Department, for the use of the Officers and Subordinates temporarily employed on the Upper Godavery works, and have directed him to charge their cost, Rupees 1,496-15-7, to the estimate for those works, and to remit the amount to this Office for payment to the Sub-Treasurer, as it appears to be the intention of Government that the whole of the expenses attending the opening of the Godavery should be debited to the estimate, and I conclude this applies to instruments equally with other stores.

No. 300. ORDER THEREON, 28th September 1861, No. 1,801.

The Chief Engineer has correctly understood the intention of Government; and his proceeding reported in this letter is approved.

(Signed) J. D. SIM,
Secretary to Government.

No. 301. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th September 1861, No. 4,667 :—

SIR,

1. With reference to Proceedings of Government dated 30th ultimo, No. 1,649, I have the honor to inform you that the establishments for the two Locks lately completed in the Kistna Delta will be met from the repair allotment of the District during the current year, but that they will be entered in the Budget for the ensuing year 1862-63.

2. I would request a re-consideration of the order relative to the time for which these establishments have been sanctioned, as it is very desirable that the posts for this class of servants should be considered of a permanent character, and that they should not be filled up by any persons that may be available at the time the locks are required.

3. I would suggest therefore, as a preferable arrangement, that the two establishments be sanctioned permanently for 12 months, but that when not required for the locks, the salaries be disbursed from the work on which they are employed.

4. A Tabular Statement in prescribed form is herewith forwarded.

No. 302. ORDER THEREON, 28th September 1861, No. 1,802.

The establishments are sanctioned for the whole year, and may be paid for the current year out of the repair fund as proposed in paragraph 1, commencing from the dates specified in paragraph 2 of Colonel Horsley's letter of 13th August 1861, No. 3,840; but the charge should be duly provided for in the next year's Budget, with explanation of the necessity of entertaining the servants.

(Signed) J. D. SIM,
Secretary to Government.

Read again Chief Engineer's Endorsement, dated 27th August 1861, No. 4,361, recorded in the Proceedings of Government, dated 30th August 1861, No. 1,646.

No. 303. Read also the following letter from W. J. RAYNOR, Esq., Officiating Civil Paymaster, to J. D. SIM, Esq., Secretary to Government, dated 11th September 1861, No. 237 :—

SIR,

With reference to the Order of Government dated 30th ultimo, No. 1,646, I have the honor to state that the full allowances of District Engineers Godavery and Trichinopoly, are available from the date (20th March 1861) of Colonel Boileau's appointment as Deputy Chief Engineer; but the Officers (Major Stoddard and Captain W. C. Palmer) now acting in the appointments are not entitled to the same, unless confirmed therein by Government, as laid down in paragraph 3, Section XIX of the General Staff Rules,* which is equally applicable to Military Officers employed in the Public Works and Civil Departments.

* Page 464, Military Pay and Audit Regulations.

No. 304. ORDER THEREON, 28th September 1861, No. 1,803.

The Government authorize the full allowances of District Engineer of Godavery and Trichinopoly to be passed respectively to Major Stoddard and Captain Palmer retrospectively from 20th March 1861, as a special case, in consideration of the long periods for which they have been acting in their present appointments.

(Signed) J. D. SIM,
Secretary to Government.

No. 305. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th August 1861, No. 4,453:—

SIR,

1 Letter from the District Engineer Malabar, with one enclosure.
1 Do. do. from do.
1 Map.

* No. 91, 16th July 1861.
No. 112, 9th August 1861.

1. Referring to the Order of Government No. 1,073, dated 10th June 1861, and to your Memorandum No. 309, dated 20th August 1861, I have the honor to forward herewith for the information of Government the accompanying two letters* from the District Engineer of Malabar, with one from the District Engineer Coimbatore No. 146, dated 6th August, enclosed.

2. Captain Bean in his letter of the 16th July states, that he is unable to report at present upon the capabilities of the navigation of the Beypúr river, it being full from bank to bank and likely to remain so until the close of the monsoon, but promises to obtain all the information possible without delay. From the reports he has received he does not think that any material improvement can be effected in the river's bed, as it is said to have a great fall between Yeddakarra and Karkúr at the foot of the Ghát of that name, and to abound with rocks.

3. In the 5th paragraph of their Orders of the 10th June 1861, No. 1,073, the Government refer to a letter from Mr. Civil Engineer Fraser, dated 13th March 1861, which letter has not been communicated to this Office; but on looking at Mr. Fraser's report of the 29th July 1858 (last paragraph) adverted to in the Order of Government, No. 2,185, dated 18th October 1858, I find that gentleman remarks as follows, " I understand that except during the monsoon, the navigation " up to Mambat is very uncertain, and I am of opinion from what I saw of the river at Nellambúr, " and from what I have heard of its character lower down, that the navigation could be much " improved, and probably extended to at least the point where it crosses the proposed new road, &c.''

4. On referring to the map which accompanied Mr. Fraser's report, and which is herwith forwarded, I am inclined to believe that the point alluded to by that gentleman is the crossing between C. D., or about three miles north-west of Nellambúr, and that he had no idea at that time at all events, that the navigation could be extended as far as Karkúr, as the Government appear to think was the case, and certainly from the report given of this part of the river by Captain Bean in the 2nd paragraph of his letter, there does not appear to be any likelihood of our being able to carry the navigation beyond Yeddakarra as the extreme limit. Arreakode, several miles below Mambát, is at present the head of the navigation, from whence the produce of the Coffee estates above the Karkúr Ghát is sent to Beypúr. The District Engineer's attention will, however, be given to this point, and his further report on the subject will be submitted to Government when received.

5. In the meantime, I would suggest that operations this year should commence at Yeddakarra and be carried on from thence by the new trace to the top of the Ghát, and that a second party should commence from the latter point and work towards Karkúr, forming a trace of not less than 6 feet in width.

No. 2,568, dated 12th July 1861.

6. With reference to the 6th paragraph of the Order of Government above quoted, Lieutenant-Colonel Birdwood has already reported at my request, and during my absence from the Central Office, that Mr. Sub-Engineer Bailey is quite competent to undertake the duty of superintending this important work. This I ascertained in correspondence with Captain Bean, who represents Mr. Bailey as a first-rate Executive Officer and one who has had considerable experience in road making in Malabar, which will assist him much in the duty now assigned to him. Government in their Order No. 1,411, dated 29th July 1861, have approved of the proposition to place Mr. Assistant District Engineer Konig in charge of Mr. Bailey's Range leaving Mr. Assistant District Engineer Brosnahan at Palghát, until the operations on the Karkúr Ghát are completed for the season. Mr. Bailey will thus be at liberty to devote the whole of his time to the Ghát work. The difficulty will

be to furnish him with subordinates. Captain Bean states that he knows of no Maistries whom he could appoint for the work, and that the Subordinates of the Department in his District are all fully occupied. As this however, is a special and most important work and not intended to occupy more than four or five months, I am of opinion that the less important works of the District upon which the Subordinates are now employed should give place to it, and that the District Engineer should be directed to provide the necessary subordinate agency from his present fixed establishment, supplying the places of those employed on the Ghát by temporary men, whose salaries can be charged to the works on which they are engaged, while those of the permanent establishment can, for the time, be debited to the Ghát allotment, viz., Rupees 16,500. I have enquired of Captain Carpendale, Principal of the Civil Engineering College, whether he has any men fit for this work, and he tells he has not; and the neighbouring Districts of Coimbatore and South Canara are far worse off for subordinates than Malabar, and cannot therefore supply any to the latter. It occurs to me, however, that Captain Bean may be able to obtain the services of a steady and efficient Overseer from H. M.'s 66th Regiment at Cannanore, or if not from that Regiment, perhaps from H. M. 60th Rifles at Wellington. If the Government have no objection I will instruct Captain Bean to make enquires of the Officer Commanding H. M.'s 66th Regiment, and Captain Farewell to do the same as respects H. M.'s 60th Rifles at Wellington. The latter Officer has a Sub-Overseer under his orders, by name Manuel Pillai, who was present in 1858 when the former trace was made, and I would propose that this man should be placed under Mr. Bailey for the time being, as his knowledge of former operations will be very useful in discovering the trace which is said to be so much overgrown as to be nearly obliterated.

7. As respects the latter clause of the 7th paragraph of the Government Order under reference, I had no intention when I addressed Government on the 9th May last, No. 344. to recommend any outlay this year on the connecting line from Goodaloor to Ootacamund, believing it to be far more important to complete the trace up the Karkúr Ghát, and from thence to Goodaloor and Chikkinalla on the borders of Mysore with the means Government might be disposed to grant for the purpose. The present road between Ootacamund and Neddivattam at the top of the Goodaloor Ghát, though far from good, leading as it does up and down steep hills, is nevertheless practicable and is used occasionally by carts. The Ghát itself is far too steep for wheel traffic, but for laden bullocks and ponies it is quite practicable. The distance from Ootacamund to Goodaloor is 22 miles by the present line, and there is a maintenance allowance of Rupees 21 per mile for the first 10 miles to the Pykara river, and of Rupees 50 per mile for the remaining 12 miles to Goodaloor.

8. There can be no doubt that if the Karkúr Ghat and the Trunk Line from thence to Goodaloor and Chikkinalla is made practicable for cart traffic, the Goodaloor Ghát and the branch line to Ootacamund ought to be so also, and as the Government have decided upon putting the former in hand and, I conclude, prosecuting it to completion, it is desirable that the latter also should be attended to as far as our means will allow.

9. In his letter to J. Ouchterlony, Esq., No. 52A, dated 23rd July 1858, annexed to the Order of Government No. 2,185, dated 18th October 1858, Mr. Fraser points out the work to be executed on this line as follows :—

" From Goodaloor on the main line a branch road will be carried to Ootacamund; starting from Goodaloor this branch will run along the north-west slope of the ridge on the south-east slope of which is your coffee plantation; it will run nearly parallel with the road you have made to Goodaloor and cross the ridge probably near your stores, thence it will pass through your plantation and up the valley to Neddivattam, from whence a new road will be made to Ootacamund. This branch will also be 18 feet wide, and no part of it will have a steeper incline than 1 in 25."

10. In his report dated, 29th July, Mr. Fraser states that there is no particular difficulty in the ground to be traversed except at the head of the Ghát, which will require careful tracing. He recommends a slope of 1 in 25, which will make the distance 15 miles, the length of the present Ghát being about 5 or 6 only. I am of opinion, however, that a gradient of 1 in 25 is unnecessary, and that 1 in 18 or 20 would be quite easy enough, while it would shorten the

distance considerably. There is no doubt but that the present Ghát, steep as it is, will continue to be used by foot-passengers and by laden cattle to a great extent, even after the new Ghát is completed. The remaining portion of the line from the top of the Ghát into Ootacamund on the plateau of the Neilgherries might have a gradient of 1 in 25. Mr. Fraser further states, " that " the Ootacamund end for about half a mile in length had formerly been opened 40 feet wide, but " so unskilfully that he had to re-construct it at a width of 21 feet. This part was very care- " fully made, as it was intended as a model for the rest of the line. About 120 yards were opened " at a width of 12 feet, and one mile and a half at 9 feet width. A considerable portion of the " remainder of what had been opened to 6 feet in width was rectified, and the former trace between " the point marked A on the map and Neddivattam was gone over several times, its defects " ascertained, and although no new trace was actually made, the ground for the new line was " fixed upon."

11. While on the Hills in July last, I had an interview with Mr. Ouchterlony, and spoke to him about the desirableness of completing the new trace from Goodaloor to Neddivattam at the same time that the Karkúr Ghát trace was in progress. He is very desirous that no further time should be lost in carrying out this long contemplated improvement, and considers that the line selected by Captain Francis, and approved of by Mr. Fraser, is the best that can by adopted. I would suggest therefore, that this trace should be taken in hand at once under Captain Farewell's supervision, and that a sum of Rupees 5,000 should be allotted for the purpose from the reserve fund of the current official year, and that the above Officer be permitted to select one or two steady men from H. M.'s 60th Rifles to act as Assistant Overseers, and to be paid at the rate of Rupees 50 a month in addition to their Military pay, from the above allotment.

12. As respects the first portion of the line out of Ootacamund, which is in fact the same as that leading to the Governor's Sholah, and for which an estimate will shortly be submitted for sanction, I would suggest that Mr. Rohde, Principal Inspector General of Jails, be asked whether it would not be possible for him to employ the prisoners thereon. When I saw him lately at Ootacamund he spoke to me on the subject, and seemed to think that the prisoners might very well be employed on the portion between Ootacamund and the Pykara river, if located in sheds prepared for the purpose along the line. As there will shortly be no work for them at the Jail at Ootacamund, unless the extension is determined on, the above appears to me to be the best way of employing the prisoners.

No. 306. ORDER THEREON, 30th September 1861, No. 1,804.

1. In this letter the Chief Engineer reports further on the construction of the Trace from Mambát through the Karkúr Pass to Goodaloor, &c.

2. In paragraph 5 of the Government Order 10th June 1861, the Chief Engineer was instructed to enquire into the practicability of extending the communication by water to some point beyond Mambát. Captain Bean reports that the Beypúr river is now full and that he will make the necessary examination as soon as possible. He and the Chief Engineer doubt the navigability of the river beyond Yeddakarra at furthest. The Order of Government referred to paragraph 5 of Mr. Fraser's letter of the 13th March 1861, in which he writes of the practicability of extending the navigation by a still-water Canal as far as Karkúr itself. All that Government however intended was that the road should commence at that point, beyond which the navigation, by river or canal or both, could not be advantageously extended. As time is an object, the Governor in Council resolves to adopt the proposal in paragraph 5 of the Chief Engineer's letter, viz., to make Yeddakarra the present starting point on the western side, the work being carried on from thence upwards, while a second party works downwards from Madnadkhany at the top of the Pass.

3. Mr. Bailey the Sub-Engineer, is reported to be specially qualified for Ghát work, and his whole time is now available for the work. There is a difficulty, however, in procuring competent Subordinates; an Overseer Mr. Campbell, has just been transferred from South Arcot. Sub-Overseer Manuel Pillai may be placed under Mr. Bailey, and for the rest Colonel Horsley and Captain Bean must do the best they can under the circumstances.

4. The latter part of Colonel Horsley's letter refers to the line from Goodaloor to Ootacamund.

5. Colonel Horsley proposes that a grant of Rupees 5,000 be made this year for completing Captain Francis' Trace from Goodaloor to Neddiwattam, the work being undertaken by Captain Farewell with one or two steady men drawn from Her Majesty's 60th to act as Assistant Overseers. The Government sanction the proposed outlay, if Colonel Horsley considers it preferable to commence operations here at once instead of first completing the Trace from Nandkany to Goodaloor. As to the other extremity of this line Colonel Horsley proposes that Mr. Rohde should be asked whether he could undertake it with convict labor. The Government have not yet determined whether out-door Convict labor shall be allowed or not, and this part of the subject must therefore lie over for the present.

(Signed) J. D. SIM,
Secretary to Government.

No. 307. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 21st September 1861, No. 5,133:—

SIR,

1 Letter from Superintendent of Marine, dated 16th September 1861.

1. With his letter dated 28th August 1860, No. 450, the Chief Engineer of the Straits Settlements requested me to provide a 1st Class Lantern for the Malacca Port Light house, and on the 4th October 1860, forwarded a remittance of Rupees 600 in part payment for the same. The description of Lantern required not being ready for issue in the Grand Arsenal, I requested the Principal Commissary of Ordnance to construct one, according to a drawing furnished him. This he has done, and the Lantern is now ready for shipment. I requested the Superintendent of Marine to provide freight for the same to Singapore, but that Officer in his letter herewith forwarded, states that all charges on account of freight, boat hire, &c., have been of late, and are still returned by the Civil Paymaster as inadmissible, in consequence of provision not having been made for them in the Budget Estimate for 1861-62, and that unless I can undertake to forward to him the amount of expenses thus incurred, he must decline engaging freight.

No. 2,596, dated 16th September 1861.

2. As I have no funds wherewith to pay the charges required on account of the Lantern, the Rupees 600 remitted by the Chief Engineer having been advanced to the Principal Commissary of Ordnance, and there being a balance of about Rupees 300 still due to the Ordnance Department, I beg to solicit the sanction of Government to such sums being advanced to me from the funds at the disposal of the District Engineer Presidency, as will enable me to meet the expenses incurred on account of the construction, &c., of the Lantern, as also for freight and other charges, on the understanding that all advances on this account will be recovered from the Chief Engineer of the Straits Settlements and re-funded to the District Engineer Presidency.

No. 308. ORDER THEREON, 30th September 1861, No. 1,805.

The proposal of the Chief Engineer to draw advances from the Presidency District Engineer for expenses connected with the construction and transmission of a Lantern for the Malacca Port Light house is open to objection. Colonel Horsley will be requested to submit a Memorandum of the probable amount required, and an Order will be issued on the Sub-Treasurer for the sum.

(Signed) J. D. SIM,
Secretary to Government.

No. 309. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 4th July 1861, No. 2,366:—

SIR,

1 Copy of Proceedings, No. 679, dated 20th May 1861.
1 Copy of letter to the District Engineer North Canara, No. 12,286, dated 22nd April 1861.
1 Letter from the District Engineer North Canara, No. 18, dated 21st May 1861.
1 Copy of Proceedings thereon, No. 1,272, dated 5th June 1861.
1 Letter from the District Engineer North Canara, No. 26, dated 29th May 1861.

* To District Engineer, 22nd April 1861, No. 12,286.
From District Engineer, 21st May 1861, No. 18.
To District Engineer, 29th May 1861, No. 26.

1. With reference to the Proceedings of Government, No. 877, dated 30th April last, the first three paragraphs of which were duly communicated to the District Engineer of North Canara, I have the honor to forward herewith correspondence,* as per margin, with that Officer relative to the points noticed by Government, in connection with the repairs executed to the Salt Kotai, at Halandi.

2. The District Engineer's letter of the 21st May 1861, has reference to the delay in his enforcing the order issued by this Office on the 18th December 1860, for the recovery from the late Mr. Machado, of the amount paid by him to the Contractor over and above the value of work actually performed. Captain Walker explains that he did not feel himself at liberty to act on that order, as having addressed the Central Office on the 14th December, after personal inspection of the Salt Kotai, and knowing that the letters on the subject had crossed, he considered it proper to await the further orders of the Chief Engineer, which were received by him on the 19th January 1861, and thus the only opportunity he could have had of recovering the sum of Rupees 105 for which Mr. Machado was held responsible was when that individual's salary bill for January passed through his hands. As the District Engineer's letter, last quoted, in no way extenuated Mr. Machado's negligence and inefficiency, I conceive there should have been no doubt in the mind of Captain Walker that the orders he had first received should be considered final. The District Engineer adds, that judging from the Chief Engineer's Proceeding in the case† of Mr. Overseer Laskey, he might have been expected to recover about Rupees 10 from Mr. Machado, that is, the first instalment of the retrenchment to be made, and that for the non-recovery of the balance of Rupees 95 he would have been held free of blame, Mr. Machado having died on the 1st March. The circumstance of his having omitted to recover even the first instalment, is explained by that Officer to be owing to his "not having entirely made up his mind as to the propriety of the course adopted by "the Chief Engineer (although he obeyed his orders) in making him draw up and sign a fresh "bill, purporting to be one of actual expenditure on a certain work, instead of himself "disallowing on audit and retrenching such expenditure as he disapproved of." Not a word was said about recovery by instalments in Colonel Horsley's Proceedings, No. 8,154, dated 18th December 1860, whereas a special proposal to obtain what was due from Mr. Laskey *by instalments* was made in Colonel Horsley's letter of the 21st January 1861, and was approved and sanctioned in Proceedings, No. 225, dated 2nd February 1861, so that I cannot think with Captain Walker that it was at all requisite for him to look to any other case for his guidance, where he had instructions clearly laid down for him; and his duty was simply to *obey* and not to begin to canvass the propriety of any course, which as the Head of the Department, Colonel Horsley considered it right to pursue.

† See paragraph 6 of letter to Government, 21st January 1861, No. 9,067.

3. Having offered the explanations noticed above, Captain Walker requests the decision of Government in the case under notice, on the three following points:—

(1.) Whether in asking the Collector's co-operation in the enquiry into a complaint, relative to the unsatisfactory manner in which the repairs to the Halandi Salt Kottai had been executed, and acting on the report of the Deputy Collector, he was not conforming to the principles which should regulate the Proceedings of a District Engineer?

It seemed to the Chief Engineer that the matter at issue was purely a professional one, and that the proper person to be called on to report on the case would have been one of the District Engineer's own Officers. In fact, Colonel Horsley could see no more reason why Mr. Ball should be called in to decide on an Engineer matter, than that Captain Walker, or any of his staff should be called in to decide a purely Revenue matter.

(2.) and (3.) The two next points may be considered, and replied to together, viz., first, whether to his remonstrances against "an inordinate delay" in the Central Office, the Chief Engineer was justified in telling him, that it was "no part of his duty to comment on the rapidity or otherwise "with which papers are passed through the Central Office," and second whether any loss to Government not made good by Mr. Machado, can be imputed to his own delay, or rather to that of the Central Office.

4. Government have already passed Orders* on what they truly termed "the tedious correspondence which has taken place "in this case," but I think that they have omitted to bear in mind that the period of time involved in which the greatest delay took place, was just that for which Colonel Horsely had on several occasions in letters† as per margin to point out the difficulties which the Central Office had to contend with, owing to the various changes which occurred chiefly in the Audit Department, and which made it necessary to put in as acting the best men procurable, though far from efficient. North Canara, moreover, was in a few months, first under Captain Carpendale, then under Lieutenant-Colonel Boileau, then under Lieutenant-Colonel Ludlow, then under Lieutenant-Colonel Lawford, then again under Lieutenant-Colonel Ludlow, and again under Lieutenant-Colonel Lawford; so that really it is not surprising, overworked and changed as the Deputies have been, and with an inefficient Office to aid them, that occasionally subjects should, as was the case of that under notice, be even lost sight of for a while.

* 30th April 1861, No. 877.

† 27th September 1860, No. 5,243.
19th October „ „ 6029
22nd November „ „ 7,234.

5. But while suffering from these inconveniences, Colonel Horsley did not feel it necessary that he should make them known to the District Engineers, and when one of them addressed this Office in language (happily *only one* ever uses such language to the Head of this Department) which he himself would not tolerate from his own Subordinates, and such as the Chief Engineer would never think of using in addressing Government, when, I say, Captain Walker taunted this Office with incurring a most "objectionable amount of delay," Colonel Horsley very properly reminded him that "it was no part of his duty to comment on the rapidity or otherwise with "which papers are passed through the Central Office."

6. If any District Engineer finds that a subject has been apparently overlooked, nothing is so easy for him as to respectfully request the favor of an early reply to his communications.

7. Captain Walker is of opinion that the Chief Engineer was not justified in expressing such a judgment, and he is desirous to have the decision of Government upon the point. Though I might well decline to trouble Government in this matter, yet as the questions conveyed are embodied in a letter, which is submitted on other grounds, I lay the subject before them, confident of what their decision will be; for if Office discipline be not thoroughly maintained, it will be impossible for the Head of the Department to conduct the administration thereof in a manner satisfactory to himself or to Government.

After the above explanation it will be seen that this Office is ready to share with the District Engineer, the onus of entailing upon Government the small loss of Rupees 105, resulting from the non-recovery of that sum at a proper period from Mr. Machado.

4. Referring to paragraph 3 of the Order of Government under reply, I beg to state that the circumstances under which the work was given on contract, are as follows:—

Mr. Assistant Overseer Fernandez, by whom the estimate was prepared, was relieved by Mr. Overseer J. Machado, in charge of the Coondapúr Range, on the 9th February 1860; and in the latter Subordinate's Inspection List for that month, under date the 27th, he recorded as follows:— "Having experienced a difficulty in procuring Coolies, &c., at Halandi, &c., gave the repairs of the

" above Kotais, on contract, to Paseoo Saldanha under the security of Larenzo Sooza," paying, as the District Engineer adds, an advance of Rupees 50. Captain Walker, therefore, was aware that this work had been given out on contract, but I infer from the 6th paragraph of his letter, as above, that it was not until he received the bill for the work, with Canarese Contract and bond, accompanying, that he was made aware how entirely Mr. Machado had disregarded the terms of the estimate in carrying out the repairs in question. In reply to the second query in paragraph 3, Captain Walker states, that Executive Officers and Agents in charge of Ranges in the North Canara District are permitted by him to give out on contract minor works, such as that in question, on their own responsibility.

Vide paragraphs 2 and 3, District Engineer's letter No. 47, dated 26th June 1860.

Vide paragraph 4, District Engineer's letter No. 26, dated 29th May 1861.

5. Colonel Horsley's reason for acquitting the Contractor, was because Mr. Machado evidently authorized, if he did not order, the Contractor to do exactly as he did in the matter of the repairs. It was clearly the Overseer's business to see that the Contractor complied with the terms of the estimate, and this he neglected to do. I trust under these circumstances that Government will be pleased to accept the amount considered as the value of the work done, and actually paid for to the Contractor, and as requested in my letter No. 12,399, dated 25th April 1861, that they will sanction the writing off to " Profit and Loss" of the sum of Rupees 105.

6. The subject alluded to in paragraphs 4 to 6 of the District Engineer's letter of the 21st May 1861, will be laid before Government in due course.

No. 310. ORDER THEREON, 30th September 1861, No. 1,806.

1. In this letter the Deputy Chief Engineer late in charge of the Central Office, furnishes the information required in the Order of Government of 30th April 1861, No. 877, respecting an overcharge in the bill for repairs to the salt Kotai at Halandi in North Canara.

2. It is evident from a perusal of the papers that Mr. Assistant Overseer Machado was clearly answerable for this overcharge ; but as that individual is dead, there appears no other course left but to write off the amount, Rupees (105) one hundred and five, and authority is accordingly granted for this being done.

3. As to Captain Walker's questions referred to in paragraph 3 of Colonel Birdwood's letter, the Government have to observe as follows :—

Question I.—It was open to Captain Walker to seek the aid of a Revenue Officer to value the work in question, and equally so to the Chief Engineer to require a professional opinion on the subject.

Question II.—No subordinate has a right to rebuke his superior.

Question III.—Captain Walker should have obeyed his superior's orders to recover the amount of overcharge, instead of placing them in abeyance.

4. There can be no doubt that there was much delay and inaction in the Central Office in the matter in question ; and the Government make great allowance for Captain Walker under the circumstances, but he must himself perceive that disputatious correspondence with the Head of his Department is subversive of all discipline and injurious to the public service.

(Signed) J. D. SIM,
Secretary to Government.

No. 311. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 16th August 1861, No. 37:—

SIR,

1. Your letter No. 46, of 7th May last, transmits accounts, purporting to exhibit the financial results of the Dowlaishwaram Workshop, from the date of its establishment in 1854.

2. On the debit side of the balance sheet are entered,

	RS.
Cost of labour and materials...	5,61,698
Do. of superintendence...	69,335
Total...	6,31,033

On the credit side, appears the estimated value of the work done, made up of the aforesaid cost of labour and materials, and of a percentage for wear and tear of machinery amounting together to Rupees 5,94,090, and showing therefore a loss of Rupees 36,943. Your Chief Engineer, however, represented that this apparent loss had arisen from omission to add the cost of superintendence to the value, which, if this were done, would be raised to Rupees 6,63,425, and would show, instead of a loss, a gain of Rupees 32,392.

3. It should however be explained to the Chief Engineer that in order to exhibit the financial results of the Workshop, the account should have shown on one side :—

(1.) A percentage, for wear and tear, on the cost of buildings and machinery ;

(2.) Cost of materials manufactured or converted, and of the labour employed in manufacturing or converting them ;

(3.) Cost of superintendence ;

(4.) Interest on capital.

4. The total of these items would represent the cost of the work done, and the value to be set off against the cost, would be the marketable value of the work done, the price, that is, for which the articles manufactured could have been sold, or for which similar articles could have been purchased. It is very probable that means for determining such marketable value for past years, no longer exist, and that any comparison now made must be based upon conjecture. But it is evident that if the accounts of the Workshop are to answer any useful purpose, they must in future be prepared on the principle indicated above. If the value of the articles manufactured be assumed to be equal to the cost of manufacturing them, plus a certain percentage, there must necessarily be an apparent gain by the manufacture. But what it is really of importance to know, is whether it is cheaper to manufacture in the Workshop, or to purchase in the market, and this can only be determined by ascertaining whether the cost of maintaining the Workshop be greater or less than the sum for which the articles manufactured might have been purchased.

No. 312. ORDER THEREON, 30th September 1861, No. 1,807.

Ordered to be communicated to the Chief Engineer, with reference to the Order of Government of 28th January 1861, No. 183 ; and for report on paragraphs 3 and 4, with reference to the correspondence noted in the margin. The suggestions in the two paragraphs just quoted appear to the Government to have been in a great measure anticipated by the Committee on the Dowlaishwaram Workshop Accounts, in the rules recently drawn up by them. The Chief Engineer to whom the rules have been forwarded for modification in certain particulars, will carefully consider the suggestions made in this Despatch for comparing the marketable value of articles with the cost of manufacturing them in the Government Workshops.

Government Order, 16th April 1861, No. 762.
Do. 20th July „ „ 1,347.

(Signed) J. D. SIM,
Secretary to Government.

No. 313. Read the following letter from Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, in charge of Central Office of Public Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 4th July 1861, No. 2,353:—

SIR,

1 Letter from District Engineer Tanjore, dated 26th February 1861, No. 372.
1 Do. to do. dated 7th March 1861, No. 10,741.
1 Do. from do dated 22nd March 1861, No. 411.
1 Do. to do. dated 3rd May 1861, No. 98.
1 Do. from do. dated 9th May 1861, No. 15.
1 Do. to do. dated 5th June 1861, No. 1,237.
1 Inspection List from Captain Palmer, First Assistant District Engineer Cuddapah, dated 1st May 1861.
1 Letter from District Engineer Cuddapah, dated 13th June 1861, No. 158.
1 Do. from District Engineer Malabar, dated 24th June 1861, No. 69.

* From Chief Engineer to Government, dated 12th February 1860, No. 10,238.
Proceedings of Government, dated 11th May 1860, No. 982.
From Chief Engineer to Government, dated 16th October 1860, No. 5,893.

1. Adverting to the correspondence* marginally noted, I have the honor to submit for the information of Government, letters from the District Engineers of Tanjore and Cuddapah, further illustrative of the inconvenience of the rules, under which the grant of travelling allowance to members of the Public Works Department, is now regulated.

2. In the case of Tanjore it will be observed, that though the duties of the District Engineer rendered it necessary for him to halt throughout the month of January 1861, his actual expenses during that period in keeping up his marching establishment had been 100 Rupees, as that Officer found it requisite to purchase bullocks and carts to "render himself independent of the caprice of "bandy-men, and of imposition."

3. Under the rules, however, only three days' travelling allowance were passed to him for the month in question, that being the number of days, on which he had visited works situated more than five miles from his ordinary residence.

4. The case in Cuddapah is nearly similar. In the Madanapalli Range, bullocks cannot be hired, and the Executive Officer in charge, Captain Palmer, has in consequence been compelled to purchase and keep up cattle of his own, the cost attending which, he reports to be between 80 and 90 Rupees, in addition to that of maintaining the other portion of his marching establishment; whenever, therefore, travelling allowance for a number of days is not passed to him in any one month he suffers loss.

5. In April last, Captain Palmer claimed 27 days' travelling allowance, on the grounds that he had been living in tents, and had to keep up his full marching establishments; but only 21 days were passed to him.

6. Both of these Officers therefore consider themselves hardly dealt with, and are, moreover, of opinion, that it was never contemplated that Officers situated as they are, should be subjected to actual loss. Constituted, however, as the rules now are, no course other than that which has been followed by this Office, in dealing with their respective cases, could have been adopted; but if the cases had been those where Upper Subordinates were concerned, full travelling allowance for the whole month could have been passed, provided only it were certified that carriage for a tent had been actually and necessarily kept up during that period. Hence on a consideration of the matter, I have deemed it desirable to solicit the attention of Government to the letters addressed to them last year, by Colonel Bell and Colonel Horsley on the subject of the working of the Bengal travelling allowance rules in this Presidency.

No. 10 238, dated 13th February 1860.
No. 5,893, dated 16th October 1860.

In Proceedings, dated 11th May 1860, No. 982.

7. The alterations and changes proposed have been approved of by Government, and considering that from one cause and another, over which the members of this Department have no control, the cost and difficulty of keeping up, and maintaining efficient marching establishments is increasing in almost every District, and that in consequence thereof, the working of the present rules has a tendency to create and foster discontent, I trust that the sanction of the Government of India to the scheme proposed, and recommended by the present and late Chief Engineers will be obtained as early as possible.

P. S.—Since writing the above, I have received the accompanying letter from the District Engineer of Malabar, from which it will be observed that though the Officer in charge of the Kutnád Range has no house to live in when at his fixed station (Palghát), and is in consequence obliged to keep up his marching establishment throughout the month, the District Engineer has been compelled in accordance with the rules to decline passing to him travelling allowance when halting there in excess of the authorized number of days, a circumstance fully proving the unsuitableness of the rules to this Presidency.

No. 69, dated 24th June 1861.

No. 314. ORDER THEREON, 30th September 1861, No. 1,808.

Resolved that the Chief Engineer be informed that the Government defer passing orders on his letter dated 16th October 1860, No. 5,893, giving cover to the revised draft rules regarding travelling allowances, till they have come to a decision on the subject of the re-organization of the Public Works Department now pending.

(Signed) J. D. SIM,
Secretary to Government.

No. 315. Proceedings of the Madras Government, dated 30th September 1861, No. 1,809 :—

Resolved that the attention of the Chief Engineer be called to the Order of Government dated 26th August 1861, No. 1,620, and that he be requested to submit at an early date the report therein called for, on the necessity for the retention of large cash balances in the hands of certain Executive Officers.

(Signed) J. D. SIM,
Secretary to Government.

No. 316. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 19th September 1861, No. 5,039 :—

SIR,

1 Letter from Deputy Quarter Master General, No. 209, dated 8th August 1861.
1 Estimate.
1 Plan.

		RS.
1	Rest House at Bezwada	1,620
1	Do. at Shairmahomedpett	1,620
	Total..	3,240

1. Referring to the Proceedings of Government dated 10th November 1860, No. 2,333, I have the honor to forward the accompanying plan and estimate, amounting to Rupees 1,620, for the construction of two Rest Houses for Soldiers, viz., one at Bezwada and the other at Shairmahomedpett in the Kistna District.

2. The plan and estimate received from the District Engineer having exceeded the limit fixed by Government, revised ones bringing them within the sum of Rupees 1,500 were prepared in this Office, and submitted for the approval of His Excellency the Provincial Commander-in-Chief.

3. The Quarter Master General of the Army, in returning the plan and estimate, considered that "one Cook-room would suffice, and that the expense of the second Cook-room should "be devoted to building a third bath-room, which with the other two should be placed in rear of "the building." These alterations, however, cannot be effected for the same amount of estimate, but raise the cost by Rupees 120 in excess of the limit assigned by Government for these buildings.

4. I would also observe that it will not be possible to construct the buildings for less at the rates now prevailing in the Kistna District.

5. Under these circumstances I beg to recommend that the plan and estimate for the two Rest Houses, amounting together to Rupees 3,240, may receive the sanction of Government, and the work be executed from the general funds at the disposal of the District Engineer Kistna, during the current official year.

No. 317. ORDER THEREON, 30th September 1861, No. 1,810.

Referred to the Military Department for consideration, with reference to the Order in that Department, dated 31st October 1860, No. 3,870.

(Signed) J. D. SIM,
Secretary to Government.

No. 318. Read the following Proceedings of the Madras Government in the Military Department, dated 24th September 1861, No. 3,417 :—

Authorizing certain orders being omitted from the Chief Engineer's List of unanswered references. } (Vide Military Proceedings, 24th September 1861, Nos. 575-576.)

No. 319. ORDER THEREON, 30th September 1861, No. 1,811.

Ordered to be communicated to the Chief Engineer, with reference to paragraph 4 of the Order of the 12th instant, No. 1,702.

(Signed) C. G. MASTER,
Deputy Secretary to Government.

No. 320. Read the following Proceedings of the Madras Government in the Judicial Department, dated 26th September 1861, No. 1,209 :—

Sanctioning the Estimate for certain works to the Jail, Jail Hospital, and the quarters of the Jailor at Tranquebar. } (Vide Judicial Proceedings, 26th September 1861, Nos. 161-162.)

No. 321. ORDER THEREON, 30th September 1861, No. 1,812.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter of the 17th instant, No. 4,976.

(Signed) J. D. SIM,
Secretary to Government.